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The School

A MAGAZINE DEVOTED TO ELEMENTARY AND SECONDARY EDUCATION.

VOLUME II.

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THE LITTLE SCHOLAR

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WE would not have our young citizens grow up amid images of moral deformity, as in some noxious pasture, and there browse and feed upon many a baneful herb and flower day by day, little by little, until they silently gather a festering mass of corruption in their own soul. Let our artists rather be those who are gifted to discern the true nature of the beautiful and graceful; then will our youth dwell in a land of health, amid fair sights and sounds, and receive the good in everything; and beauty, the effluence of fair works, shall flow into the eye and ear, like a health-giving breeze from a purer region, and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason.

—PLATO'S *Republic*.

The School

"Recti cultus pectora roborant"

Editorial Notes

New Courses of Study.—The Canadian Departments of Education make it a practice to revise their Courses of Study at intervals of about five years. Occasionally and for special reasons the revisions come at briefer intervals. Ontario teachers have asked for new High School Courses, and the Department of Education will grant their request although the present Courses of Study are only three years old.

The teachers base their request upon "overpressure". Overpressure is not a novel plea. It was urged with some force against Ryerson's Courses of Study after 1870, and with great violence against Ross' Courses after 1895. Indeed the plea is heard in every modern State with every issue of new Courses of Study. Overpressure seems inevitable in a democracy which attemps "to put the whole boy to school".

Some explanations of the overpressure are to be found in conditions peculiar to Canada. Canada's population is sparse and her schools are few and small. She cannot hope to imitate the German schools in numbers or variety. Each Canadian High School must represent in itself many types of High Schools and many types of training. So it is that our High School boys, whether they intend to be University students, schoolmasters, merchants, or farmers, follow in the main the same course, and so it is that that course is full to overflowing with the subjects demanded by the varied interests of the community. So long as the Canadian High School remains to a large extent undifferentiated—and it must do so for years to come—there must be overpressure.

It is the reign of the Specialist in Canadian schools. The universities are organised to train specialists. Departments of Education are partial to Specialists and Schools and School Boards look askance at teachers who are not Specialists. But the Specialist does not always see his own subject in its proper perspective. Often indeed the greater his enthusiasm for his special subject the worse his perspective! A headmaster exposed to the demands of colleagues who are Specialists, and students subjected to a course of study devised by Education offices on the advice of Specialists constitute a situation in which overpressure is inevitable.

Often explanations of the overpressure may be found in State examinations and State inspections, institutions developed nowhere on this continent so fully as in Ontario. Despite all the Department of Education may hope to the contrary, State examinations are still a chief test of efficiency as between teachers and as between schools. And more or less remotely appointments, promotions, and increases of salary still depend upon the results of examinations. The effect of these conditions upon overpressure is obvious. Ontario High School inspection is highly organised and efficient. The inspectors themselves are Specialists who carry about among the schools the concentrated professional wisdom of the Province, and impart it with the authority and prestige of the Department of Education. They constitute a splendid, if not at times an inexorable, "driving" force.

No doubt the new High School courses will recognise the plea of overpressure. It will be interesting to know the shape the recognition will assume. It cannot be expected that there will be relief from State examinations. The teachers of Ontario and the ratepayers have not responded to the efforts of the Education Office to decrease the examination pressure. They seem to want more examinations! There is no doubt, moreover, that specialisation will persist. At the worst the good it does far outweighs the evil. Some relief may be found in the matter of inspection. To effect quickly its great reforms of the last seven years the Department of Education has been forced to arm its inspectors with minute instructions and large authority. Now that they have done their work, instructions and authority will probably shrink gradually to their former bounds. Some relief will also be found in further differentiation in schools and courses after the German manner. But most relief will be found in the arrangement of the studies after the American plan, in a sequence in which few subjects persist beyond two or three years, or in the resolute elimination, after the English manner, of the studies whose cultural value is more or less uncertain.

The Semester Plan.—Overpressure in American education will show itself first in the training schools for teachers. The number of the school subjects and the content of each subject are steadily expanding. Where the population is sparse and the schools are undifferentiated each schoolmaster must teach practically all subjects. It follows that, in theory at least, the schoolmaster must be competent in all subjects and the training schools must give him that competency. Under these conditions it is difficult to guard against overpressure in training schools. The more advanced the grade of training the greater the difficulty. It is extremely difficult in the Faculties of Education of Ontario where in one session and in one and the same course a teacher may be trained for service in Public School, Continuation School, High School and Collegiate Institute.

Various suggestions have been offered in the way of protection against the threatened overpressure in the Faculties of Education. The session might be extended to two years. The course of training might be limited to an indispensable minimum of the important subjects, and competency in the other subjects might be left to chance. A generous array of options might be offered in the course, and School Boards might be expected to adjust their appointments to these options. Subjects such as Art, Household Science, Manual Training, Nature Study, Commercial Work, Elementary Science, Music might be eliminated from the Course and relegated to special Summer Schools. The semester plan might be adopted.

Some of these suggestions, notably that of two sessions, are quite impracticable. Others have been adopted in part, or are being adopted. During the coming session the Faculties at Toronto and Kingston will experiment freely with the semester plan.

The subjects of the Course in the Faculties of Education are arranged in two groups or parts. Hitherto both Faculties have applied the semester plan to the subjects of one part. They intend now to apply the same principle to the subjects of both parts. This means that one-half the final examinations will be held at mid-term, if the student so elects, and the other half in May. It also means that the student will never carry more than one-half his subjects abreast. In appearance at least the plan promises relief from excessive examination strain during May, and more intensive, if not more extensive, work throughout the session. The actual results of the experiment will be awaited with interest.

Another Reproach Removed.—It has been asserted that the Canadian teacher does not love knowledge, even the knowledge that spells progress in his profession. His neglect of the Summer Courses for teachers in contrast with the American teacher's enthusiastic endorsation has been cited in support of this assertion. In behalf of the Canadian teacher it has been maintained just as stoutly that the evidence of indifference towards the professional knowledge was unsatisfactory, that the cause of the neglect lay not in the teacher but in the Summer Courses, and that given profitable Summer Courses, he would respond with an enthusiasm which would set all doubts at rest.

The Department of Education of Ontario has attempted this year to give its teachers profitable Summer Courses. These Courses, all free to teachers, included Faculty Entrance and Normal Entrance work, Third Class Work, Manual Training, Elementary Science, Vocal Music, Physical Culture, Commerce, Household Science, Agriculture, and Art. They were followed immediately by examinations and provincial certificates, and will be followed later by promotions and special grants.

The Courses were successful, surprisingly so. More than 1000 teachers attended them. The Faculty Entrance Course alone registered more than 75 teachers, Physical Culture more than 85 and Art more than 160. The Department of Education has already consented to continue the Courses next year. In the presence of these figures it may feel compelled to expand them.

And the reproach against the Canadian teacher is gone—buried beneath the registration lists of this year's Summer Courses.

A Hope.—Chancellor Burwash withdraws from the Presidency of Victoria University before the opening of this session. He takes with him in his retirement a wealth of good wishes from the people of Canada. All classes of citizens owe him a great debt of gratitude, none a greater debt than the schoolmasters of Ontario.

The Chancellor's activities have been heavy and varied. Next to the duties of his post at Victoria University the cause of public education has probably made the strongest claim upon his sympathies. To this cause he has given his time and his strength without stint. For well-nigh a generation he has been a foremost member of Joint Boards, Educational Councils, and Advisory Councils of Education in the Province of Ontario. He has served the teachers as President of the Ontario Educational Association, Chairman of Departments, and member of the most important Committees. He has taken such pains to understand the educational problems of his province that, apart from the experts of the Educational Office, the advice of no one has been more freely sought or more highly valued.

To say that Chancellor Burwash knows the teachers and the educational problems of to-day is not to say all. He knows the educational history of Ontario as no one else has known it or can know it. The great men and the great measures of the past, and the purpose that ran through both men and measures he *knows*. Why should he not now reveal them to us? The late Dr. Hodgins collected a vast amount of educational material in his Documentary History. Is it too much to hope that Chancellor Burwash will use his leisure to fashion out of this material the story of Ontario's educational past? In his volume on Ryerson in the Makers of Canada Series, he has given us a foretaste of what he can do. The schoolmasters of Ontario join heartily in the wish that he now complete the work.

Jimmie giggled when the teacher read the story of the Roman who swam across the Tiber three times before breakfast.

"You do not doubt a trained swimmer could do that, do you, James?"

"No, sir," answered Jimmie: "but I wondered why he didn't make it four and get back to the side his clothes were on."—*New York Globe.*

Rural School Problem

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BEFORE suggesting any improvements in the rural schools of Ontario, I wish to say that I think that they are in a better state of development than similar schools in many other provinces of Canada and in many states of the Union to the south of us, and also that under the present supervision, first, of the County Inspectors, secondly, of the Chief Inspector and the Continuation School Inspectors, and thirdly, of the agricultural experts representing the counties and the O. A. C., Guelph, rapid improvements are being made that will eventually make these schools equal or superior to any schools of their class on this continent. In the hope, however, that progress may be hastened, I venture to open the question in THE SCHOOL, believing that only good can result from a frank and fearless discussion of the situation.

The chief matters for discussion are—

(*a*) The care of the building and grounds.
(*b*) The supervision of seat work.
(*c*) The modification of teaching necessary in conducting short lessons.
(*d*) The use of the school building by the community.
(*e*) Attendance—enrolment, average.
(*f*) Continuity of service of teachers.
(*g*) Supervision—inspection.
(*h*) Administration—larger units.

The Care of the Building and Grounds.—A lady teacher at the O. E. A. last Easter described the average rural school building. Her description ran something like this:

"A weather-worn building, without any pretensions to beauty of architecture, with three windows on each side and one or two windowless 'lobbies' at the end facing the road; a treeless yard, surrounded by a more or less dilapidated fence, ungraded and covered with weeds and uncut grass; in remote parts of this yard, two forbidding, unscreened outhouses, to which no paths are ever made; a woodpile at one side of the yard, part of which has tumbled down; within, a not very clean room, with double seats of ancient date, defaced with various inscriptions and many ink stains; a primitive teacher's table before which stands one only kitchen chair, value, thirty cents; walls painted of a colour to remind one of a dull November day, while the plaster is patched

here and there with rough areas of poorly applied mortar. The picture is completed by a rusty box stove near the door, from which a rustier pipe wanders shakily through the length of the room, until it enters the chimney above the teacher's head."

Happily, such buildings are disappearing gradually, so that even now such a description is not applicable to the majority of our rural schools, but there still remain many schools in rural Ontario to which such a description must be applied if the truth is to be told.

Less than a year ago I visited the two rural schools in which I spent my first years teaching in the closing years of the last century. Both schools have been improved since that date, but strange to say, the furnaces which had been installed in both within the past ten years had become useless, and the same box stoves, rustier than of yore, had been replaced in order to tide over the end of the season.

In the first school visited there was no fire in the stove until recess. It was a cold, wet April day. The interior of the building, although free from imperfections in the plaster, which had been replaced by matched hard wood, was dark and unadorned. The furniture was cheap and unattractive. The outlook was cheerless, the inlook equally so. The teacher faithfully spent one hour and three-quarters on the subject of arithmetic for all classes! At recess a fire was started in the rusty, dilapidated stove, another subject was begun, and I departed in a discouraged state of mind over progress in that section.

On the next day a visit was paid to the second school in an adjoining section. The weather had improved so that the outlook was not quite so cheerless. The interior of the school was a great improvement over that of the first school. The walls had been tinted, a moulding put on from which a few passable pictures were hung, and the room was clean enough to present a cheerful appearance. There was evidence of more care of the library and furniture. As mentioned before, the box stove that had done duty in a past century was being used for heating purposes, although a furnace, now worn out, had been installed in the basement. The chief features of discouragement in this school were that every window was kept tightly closed during the session of the school, and the attendance, which used to be between forty and fifty, was now under twenty.

The apparent improvements in this school since the last century were in the basement, with furnace installed, brick walls in place of frame and some new single seats. There was a fair library and the apparatus was up-to-date. The floor was of good hard wood and the walls were artistically decorated. The school grounds had been enlarged, a school garden had been started, but the fences and the unkept lawn and unscreened outhouses made these improvements seem unimportant. With-

out doubt, the first improvements that should be made in the rural school sections are in the buildings and grounds.

The improvements most urgently needed in rural school sections are—

(*a*) Care of the grounds with greater facility for play.
(*b*) Decoration of the walls.
(*c*) Ventilation of the class-room.
(*d*) Cleanliness of the building.
(*e*) Private room for the teacher and cloak-rooms for the pupils.

One need only contrast the unkept grounds of most rural schools with grounds like those at the Rittenhouse school, Jordan Harbour, or with those in cities, in order to feel the force of the first suggestion. We need larger grounds, well kept and planted with trees and shrubs, which will attract and not repel the average country boy and girl. What an improvement it would be if the rural school grounds were large enough to make it possible to hold picnics thereon! Indeed, every recess should enable children to participate in the games that are now denied them except at the annual picnic. Swings, teeters and giant strides; sand-boxes, shovels and pails; baseball, races, and other games should be possible in every rural school ground in Canada. Myron T. Scudder says:

"Country children need play just as much as do city children. They need it for its mental, moral, physical and social value. They need it because it makes for happiness, contentment, and community spirit. They need it because they do not co-operate well, because they are too strongly individualistic, because they yearn for the companionship which conditions in only too many cases prevent them from enjoying, because physically they are not, as a rule, well developed, not being able to meet even as successfully as do city children the average athletic standard tests, such, for instance, as are prescribed for the Public Schools Athletic League. In all these respects play supplies the very training, discipline, and inspiration which these children most need; so its great importance to them can scarcely be overstated.

Yet in the face of this great need of theirs, we all know they do not play enough, while some have almost no play life at all. Except in places where special effort has been made to teach them, they know surprisingly few games. Moreover, their few games are strongly individualistic, training them for isolated effort rather than for co-operation.

The country child would undoubtedly play more if conditions were more favourable. But they are not favourable to play. He does not know how to play or what to play; his parents are usually out of sympathy with play; and in the country schools not only are his teachers as ignorant as himself in regard to these matters, but even if the child and his teacher did know, the trustees in many cases would interpose

objections and forbid any effort being made in the direction of organised play or athletics.

So here is where an earnest, systematic propaganda is necessary. It would be well if country and village school teachers should receive instruction in that art of play, and ministers and other adults be enlisted in the cause of rural playgrounds.

Properly organised playgrounds and adequate opportunities for enjoying them will help check the exodus from the farms. Where these have been provided, boys have definitely decided to stay at home and farm instead of leaving for the city. This is not a vision; there are actual instances to support the claim. And the equipment does not need to be elaborated nor the opportunities laboriously abundant. A boy doesn't want to play all the time. Give him an occasional chance and he is happy. Let him have his play hours to look forward to and a great play festival once a year, and the prospects, particularly of the latter, will brighten life for weeks and even months, first by eager anticipation, and then by the happy retrospect. Those who have had experience with play festivals in the country know what a tremendous power they become in the life of country people, young and old, how they check recklessness and quiet discontent by supplying the variety, the companionship, the mental and physical activity which are so ardently craved. Perhaps the chief benefit of play in the country will be found in its socialising influences, and in this respect alone it not only means greater efficiency of the individual but more wholesome community life and eventually a stronger nation."

Let every teacher in a rural school take this message to heart and insist upon some improvement, however slight, in this direction. Play with the children. Hold annual field days. Interest the parents and young people of the section in play.

After improving the playground, the teacher should turn her attention to the class room. In too many schools the decorative scheme is too suggestive of a "dull November day". I visited a rural school a few weeks ago, in which the whole interior was covered with an ornate tin sheeting, painted a metallic gray. It suggested the interior of a tomb, rather than of a class room. Such a colour scheme reacts upon the spirits of both teacher and pupils, making cheerfulness impossible. The use of matched hard wood for the walls of the class room is little less objectionable, although it is more cheerful. The ceiling of the room should be white or pale cream and only plaster or beaver board can be coloured in this way. The walls should be divided by a moulding, placed at least eighteen inches from the ceiling. If the tops of the doors are about that distance from the ceiling the moulding should be placed at that height. Windows should, of course, extend nearly to the

ceiling. Below the moulding the plaster should be tinted a gray-green, but the area painted this colour must be limited or the room will be too dark. Articles on the kind of pictures to be placed in class rooms have already appeared in THE SCHOOL and the reader is referred to them.

Decoration may have to be postponed owing to the refusal of the trustees to supply the money, but the teacher can find no excuse for neglecting the ventilation of the class room. For her own sake she should attend to this matter, but the pupils have rights that cannot be ignored. Few teachers do attend properly to the ventilation. Even when a ventilating system of some kind is provided, the teacher's attention to it is essential to its satisfactory operation, and the windows should be thrown open for five minutes at least every hour. A common custom in some parts of the country is to instal a furnace in the basement, without any fresh air duct to supply it with outdoor air. Often the registers open through the floor above into the basement, and the return current to the furnace passes through the dusty basements. In such an arrangement the air supplied to the school room is doubly vitiated, first, by the exhalations from the pupils' lungs, and secondly, by the dust of the basement. No wonder that the health of the teacher and pupils suffer in such class rooms. The inspectors should insist upon some drastic changes in the heating and ventilating of school rooms.

Cleanliness of class rooms means more than sweeping the floor once a day, although I fear that there are some schools in Ontario that do not get even that attention. It means clean floors, clean seats, clean blackboards and walls. In private houses it is recognised that bare floors must be swept at least twice a day and scrubbed at least once a week. Nothing less than this can keep a class room even passably clean, yet one hurried sweeping daily, a still more hurried dusting which only makes things worse instead of better, and a scrubbing once in three months are the rule in most rural schools. A teacher reported at the O. E. A. last Easter that one school in which she had taught had not been scrubbed for two years. At last, however, the trustees were induced to examine the building. They went down at night and examined it with the aid of a lantern, no doubt, "dimly burning". They decided, after long deliberation, that "it wasn't too bad". The teacher's account ended there and the inference is that it has not been scrubbed yet. How can such a view of clean school rooms be changed?

I suggest that each rural school teacher in Ontario organise her pupils for the purpose of keeping the school room clean and sanitary. Call it household science. Secure the aid of the Chairman of the Board of Health. Insist upon a good caretaker being secured, then assist him in the care of the school. Three girls, with as many floor brushes, could remove the surface dust at least, especially from a hardwood floor,

properly oiled, so that the room would be habitable in the afternoon. The use of damp sawdust on unoiled floors will keep down dust. In fact, if this midday cleaning cannot be done, I am inclined to recommend that the floor should be covered with sawdust in the morning in order to prevent dust from rising with the constant movement of restless feet in the class room. This sawdust could be brushed off at the close of school by the caretaker. Something must be done to cope with the dust nuisance in the rural school. Until vacuum cleaners have become household necessities, the situation must be met in some such way as outlined.

After other improvements have been made in the rural school, the teacher should be supplied with a private room and the pupils with cloak rooms. All buildings now being erected will naturally include these. In most of the old school buildings throughout the country, provision could be made for both of these by partitioning off one side and one end of the present room, which is usually large enough to accommodate fifty or more pupils, whereas the present attendance is frequently below twenty-five. The class room would be much better suited to its purpose by being made smaller and by being lighted from one side only, preferably the north, or north-east. The windows in this one side would have to be increased. The general rule is that the window space must equal one-fifth of the floor area.

The Supervision of Seat Work.—The visitor to the ordinary rural school cannot fail to observe that the pupils at their seats do not work half their time. This is more true of the younger than of the older pupils, but it is true of nearly all. Nothing would raise the standard of work in rural schools so effectively as the constant attention to seat work by both teacher and pupils. The first step in this direction is to prepare a time-table which would show what each class is expected to do each hour of the day. The class reciting should be shown in one column, the classes studying, in the next, e.g.:

Time	Recitation	Seat Work
9.05-9.25	4. History	1. Spelling
		2. Literature
		3. Arithmetic
9.25-9.45	3. Arithmetic	1. Word building
		2. Spelling
		4. History.

A time-table arranged in this way would be a guide to teacher and to pupils, and every effort should be made to observe the work outlined on such a table. In no other way can the teacher be assured that each subject is receiving its proper share of attention. At present a few subjects receive far too much attention to the neglect of others. Among these subjects are arithmetic, spelling, and map study in geography.

Science Benches for Small Schools

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THERE are certain conditions under which it will be necessary to carry on the practical work in science in a room which is also utilised as a class room. In some school buildings, not originally intended for high school classes, the growth of continuation work has led to the studies of the Lower or even the Middle School being introduced. This necessitates performing experimental work in the sciences; and occasionally through lack of space a separate room cannot be provided for this purpose and the work must be done in an ordinary class room. Or the number taking science may be so small that it does not seem necessary to set aside a whole room for the purpose, and hence what work is performed must be done in the room in which the members of the class study and are taught.

Such an arrangement has serious disadvantages both for the pupils experimenting and also for those at their desks studying. Where both science benches and school desks occupy the same room, conditions are almost sure to be cramped and inconvenient for both unless the apartment is very commodious or the number of pupils is small. The experimental work is sure to prove interesting not only to the experimenters, but unfortunately also to those supposed to be studying at their seats or having a lesson with the teacher. This distraction will cause the matter of discipline to be much more difficult. In chemical experiments there are sure to be disagreeable and irritating gases formed which, while tolerated by those responsible, will be the cause of much protest by the non-scientific members at their seats. The apparatus is much more likely to be tampered with when in a common class room which must be accessible when a science room would be locked. There is perhaps a certain advantage in such an arrangement of class room and laboratory for the school that is under-manned with teachers, and where the pupil must perform much experimental work while the teacher is busy with other classes, as he can give them a certain amount of assistance and advice during spare moments.

I wish to describe and illustrate with drawings what I consider the best arrangement of the furniture for such a combined class room and science laboratory. Much depends on the size and shape of the room as well as on the position of the windows, but the best that can be done is to show the arrangement for a typical room and each science teacher can modify this disposition to suit his conditions. A room 30 feet by 24 feet has been selected, lighted on one side by four windows (Fig. 1). Thirty pupils' seats are arranged in the ordinary method, occupying the middle of the room and facing so that the light enters from the left. The laboratory benches are placed around the wall, and the most of them

are placed at the back of the room or along the sides well toward the posterior part. They thus utilise the minimum amount of valuable floor space and are in such a position as to cause as little distraction as possible. As the benches are placed between the windows the light coming to the pupils at their desks will not be interfered with nor will any pupil at the laboratory bench have the light full in the face.

The laboratory bench itself (Fig. 2) is of such a nature as to economise floor space. Each has a cupboard beneath with two doors. The table top is folded up when not in use and when thus folded forms a front to enclose the two shelves and protect the apparatus within from

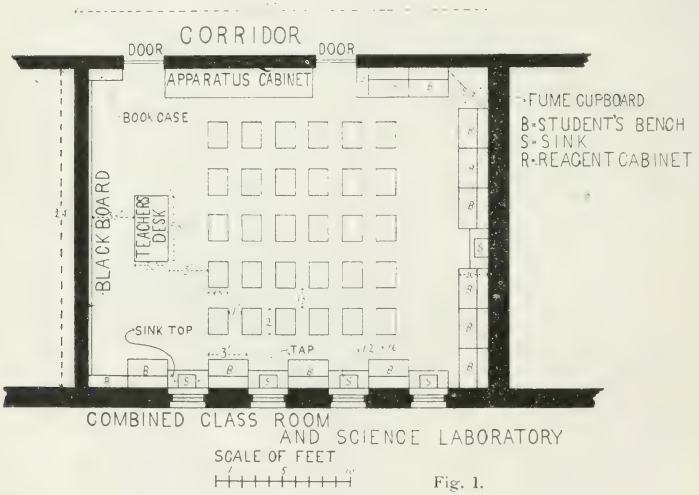

Fig. 1.

dust; it also prevents it from being tampered with. Above all runs a beam along the whole front with hooks for suspension. These project out far enough that when the top is folded a suspended pendulum will clear the edge. A gas tap comes through the top of each table equally distant from each end and well toward the back. The main gas conduit runs around the room just above the floor and is thus quite accessible.

These benches are three feet long, twenty-six inches wide when open and fifty-five inches high over all. The table top is three feet above the floor and my experience is that this is the most convenient height of a chemical or physical desk for the average high school student when standing at work. Stools eleven inches lower may be supplied if desired, but they will not be much used. The working space on the top of the

bench is twenty-five inches deep, which is ample. Three feet in length is sufficient for physics and more than is necessary for chemistry. The top is one and one-half inches thick. Beneath the folding top is a secondary top projecting sixteen inches, and this is none too wide to support the heavy top on which a careless pupil may occasionally sit. In fact, the table would be the better if the top were further supported by brackets on hinges which could be folded in against the sides when the top is raised. The cupboard beneath is eleven inches deep and the shelf in it can be placed at whatever height desired. It will be preferable to have in it one deep space beneath for tall apparatus and a shallower one above. The shelves above are about nine inches wide and seven and one-half high; this will be sufficient for most purposes. The beam above is two

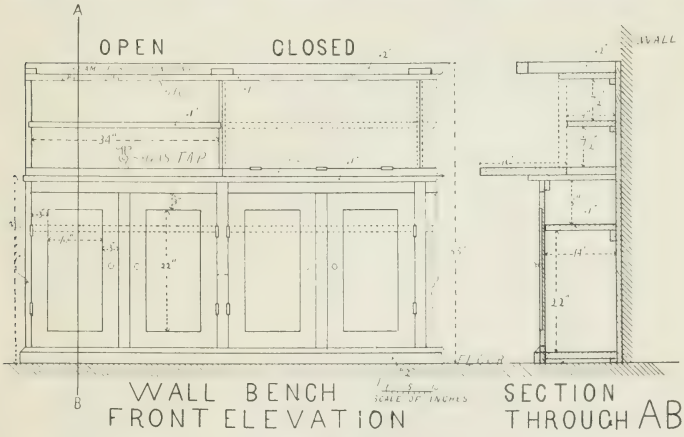

Fig. 2.

inches square, supported on 2 by 4 scantlings. The ends, shelves, back and bottom are made of inch material.

The nature of the material and finish is partly determined by the surroundings, the taste of the teacher and the amount of money that can be expended. The body of the bench might be made of white pine, ash, birch or maple. These are all suitable if well seasoned. The unexposed parts might be made of basswood. Elm is unsuitable as it warps and cracks and splinters very greatly. Oak unless old and well seasoned will shrink greatly, leaving unsightly spaces between the boards; it is also liable to crack much in drying. While the material of the sides, front and shelves is of secondary importance, the structure and material of the working top cannot be given too much care. It requires to be perfectly flat and horizontal and quite impervious and continuous.

Cracks, warping, or porosity in wood must be carefully avoided. Preferably it is made of narrow strips, say, one inch in width, glued firmly together. To add to the strength dowels may be run across the strips. If these are introduced at different depths along the strips as the top is being built up, the constituents will be firmly bound together. Ordinary glue is quite unsuitable for table-tops as the moisture gradually softens it. A good waterproof glue must be used for this purpose; such a glue can be made in a variety of ways. The following are two good recipes. Boil two ounces of isinglass in a pint of skim milk; or probably the best is made as follows: Mix together one part glue, one and one-half parts water, then add one-fiftieth part of potassium bi-chromate; this latter should be kept in a dark place. The best material from which to make this composite top is teak and this is almost exclusively used in England; if made of this wood it hardly needs to be made up of strips as teak scarcely warps, splinters or cracks in drying. This wood is not common on this continent and maple or birch are the most suitable substitutes for such table tops. Ash is too porous and inclined to splinter; oak is also porous and too much inclined to warp and crack. White pine answers well except that it is much too soft for such hard wear as a table top receives. The top beam may be made of birch or beech.

The top should be fastened in place by three strong brass fast-pin butt hinges, and the doors of the cupboards should be attached similarly except that the butts may be lighter; only brass screws should be used. Iron hinges will quickly rust and look bad and wear poorly. The hinged top when closed may be fastened by flush ring catches attached to the underside and the cupboard doors by flush bolts. These doors should also have knobs of wood or porcelain. Brass pulls will rapidly tarnish owing to the corrosive vapours produced in experiments in chemistry. The hooks attached to the beam may be those used to fasten to the ceiling in clothes closets.

The finish is for two purposes, to preserve the wood and to add to the appearance of the furniture; it must be in keeping with that of the remainder of the room. All exposed parts may be filled with silica paste filler, then finished with one coat of white shellac and one or more coats of Johnson's wax; the latter should be thoroughly rubbed and polished. The inside, unexposed parts should be given one coat of orange shellac. The table top and the top of the shelf that carries the reagent bottles should get a different treatment as it must be resistant to acids and strong alkalies. Many recipes for the treatment of table tops to make them acid proof have been given. We will give two of the best. First: Apply with a brush the liquid made by boiling logwood chips in an iron kettle; when dry give a second coat; this when dry is followed by a coat of a solution of copperas in hot water. When the table is dry rub it

down well with sandpaper. Now pour on melted paraffin of a high melting point (55°-60° C.). By means of a hot flatiron the paraffin is thoroughly rubbed into the wood to impregnate the pores. When cool, the superfluous wax is removed by scraping the surface with a thin piece of steel having a smooth straight edge. Second: *Solution No.* 1. Copper sulphate, 1 part; potassium chlorate, 1 part; water, 8 parts; boil until salts are dissolved. *Solution No.* 2. Water, 50 parts; aniline, 6 parts; hydrochloric acid, 9 parts. By means of a brush apply two coats of No. 1 while still hot, and allow the first coat to dry before putting on the second. Then two coats of No. 2 are applied and the wood allowed to dry thoroughly. Later a coat of raw linseed oil is put on by means of a cloth instead of a brush in order to get a thinner coat of oil. Then thoroughly wash the top with soap-suds and it has an ebony black appearance. Either of these should be applied to the bench top and also to the shelf above it on which the reagent bottles are kept.

The opened top is the part used for all experimental work in both physics and chemistry; it can also be used for biological work, but the lighting is not very suitable for such a purpose. This top must be rubbed off dry after use and always left folded up. The ideal method is to have one pupil at a desk in experimental work both in physics and chemistry and under these conditions there is accommodation for twelve in the room pictured (Fig. 1); if two work together then twenty-four can work at once. No lockers have been provided in the desk as it is taken for granted that in a school with such limited accommodation there will be not more than one set of pupils working in chemistry, and hence separate sets of apparatus for each pupil do not need to be locked. The cupboards below are to hold the larger and rougher pieces of apparatus, such as retort stands, burners, pneumatic troughs, test-tube stands, wire gauze, dusters, mop cloths and all metal apparatus that would be corroded if placed above with the reagent bottles, from which some fumes are sure to escape. On the shelves above are placed the reagent bottles and glass beakers, funnels, florence flasks, etc., which fumes will not injure. As the reagent bottles are closed in they will be kept free from dust which is sure to accumulate on them if they are left exposed while the room is being cleaned. The beam above will be found very useful for a number of experiments.

The ordinary kitchen or bathroom sinks are not at all suitable for science laboratories, as the enamel soon becomes chipped off exposing the iron, which rapidly becomes a prey to the corroding liquid used so frequently in chemistry. The sinks should be rectangular, not deep, and easily kept clean. The table top above should project slightly over the edge of the sink to prevent the water from splashing out. The sinks themselves should be made of thick enamelled vitrified stoneware,

white glazed inside and cane glazed outside, with overflows and plugs attached by chains to a ring in the top. They are 16″ by 12″ by 6″. These sinks should be surrounded by a draining board with a raised apron at the margin to prevent the water being splashed on the floor. The draining board and apron are preferably of slate but this will be too expensive for most schools and whitewood tops may be substituted as they stand the water well. In Canada this name is frequently given to varieties of poplar or the cucumber tree, and both these are unsuitable for this purpose; the real whitewood comes from the tulip tree. The taps should be swan neck and high enough to place a tall jar beneath them. They should be made of gun metal and have a tapering, corrugated nozzle so that rubber tubing can be easily pushed over them; brass and nickel plated-ware should be avoided as both rapidly tarnish owing to the corrosive gases, and it is almost impossible to keep them looking well. The water pipes should run around the room above the floor and each branch leading to a tap should have a cut-off, so that the whole water supply need not be shut off in order to repair a single tap. Two taps, one on each side of a sink will be useful where several students require simultaneously to use the same sink.

The benches (Fig. 1) are placed between the windows and along the back of the room while the sinks are placed opposite the windows and at the corner and also one at the back of the room. By this arrangement no student is far from a sink. As the sinks are lower than the table-tops they do not prevent access to the windows. Most of the pupils experimenting are well behind the pupils at the desks and cause the minimum amount of distraction. There is also abundant free space between the science tables and the desks, as the space between is twenty-two inches when the table tops are down and thirty-one inches when they are closed.

The other furniture must be placed in whatever wall space remains. A large apparatus case can be placed against the wall opposite the windows (Fig. 1), and two reagent cabinets are placed one on each side. These will contain the stock liquids and solids that are only occasionally used and hence are not placed on each desk. A fume cupboard is placed in one corner and should have a pipe above leading into a flue and must have a strong draft either natural or by an electric or hydraulic fan.

The above gives a description of the complete furniture, but it lends itself to much adjustment according to the shape of room, number of pupils, money to be spent, etc. The cost can be cut down in various directions. Cheap materials may be used, the number of tables or of sinks diminished and the quality of the finish may be degraded. It would be possible, but not advisable, to put in another row of pupils' desks if the number of the pupils demanded it.

From the Butterfly's Standpoint

Once upon an evening, dearie,
While I flitted bright and cheery
Over dear familiar milkweeds
Where I'd often flit before,
While I contemplated camping,
Suddenly there came a tramping
As of some one roughly stamping,
Stamping on a hardwood floor;
"'Tis a Hereford cow," I muttered,
Stamping on the stable floor,—
Only this and nothing more.

Ah, distinctly I remember,
'Twas two months before September,
And the country was affected
For within two miles or more

By a parasitic creature
Monster-limbed and coarse of feature,
They were humans and would meet you
If you dared outside your door;
And I trembled lest the tramping
Shouldn't merely be the stamping
Of the Hereford on the floor.

Then I heard a little flitter,
'Tis the hens there in the litter,
Wyandottes with chickens scraping
Just outside the hen-house door.
This I said, but ere I said it,
I was gently covered o'er,
And I cried, "It is the monster!
Let me out, I do implore;
Please to show me to the door."

Then methought the air grew denser,
And the monster seemed immenser,
As the bottle's mouth he very quickly covered o'er.
"Wretch," I cried, "uncork the bottle,
Pull the cork out, I implore!"
But he paid me no attention.
To his friend I heard him mention
Very coolly, "That's one more."
And his friend cried, "Twenty-four."

And my body never flitting
Still is sitting, still is sitting,
On the pin just where she put me
Right behind the moth before.
I am "Monarch" by my label,
But I'd sooner far be able
Just to flit and glide and flutter,
In the milkweeds I adore,
Flit and flutter evermore.

—M. F.

McKeough School,
Chatham, Ont.

"Ideals"

ANNIE E. CULLEN
Ryerson Critic Staff, Faculty of Education, University of Toronto

A Primary Teacher's message to Primary Teachers, at the beginning of a new School Year.

"Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!

—*O. W. Holmes.*

EDUCATION necessarily implies knowledge and growth. The word "Education" is a term used to interpret the training of the physical, the intellectual and the moral faculties for adaptation to every phase of life.

True growth, while naturally dependent on knowledge, is vastly superior to it. It is knowledge expanded into power, into healthful, vigorous, useful living.

A clear apprehension of the organs of the body and of their functions is valuable only when the laws which govern physical welfare are put into practice. Explanations of the moral law carry little weight from one whose actions are not in harmony with the principles of rectitude.

The amount of knowledge, which may be gained, is of infinitely less moment than the acquiring of practical skill in using what has already been obtained.

Each of the subdivisions of Education, the physical, the intellectual and the moral, should have its own distinct ideal. A low standard for one of them brings disastrous results in the attainments along the other two lines of growth. Thus it seems that the perfection ideal for character building appears from the distance to have the shape of an inverted cone, while a near approach discovers the form to be a triangular pyramid.

There seems to be no subject so constantly presented to the teaching profession as that of ideals, and yet there is no other word which invariably calls forth such signals of dismay. Nevertheless, there is nothing so necessary to conscious, mental growth as a good intellectual conception upheld for imitation, and the very reception that meaningful word meets, is positive proof that teachers feel it well-nigh impossible to approach at all nearly to their standards of excellence: yet, methinks, we should count that we have lost a day, a week, a month if, to ourselves, we have not consciously drawn nearer to perfect womanhood.

Where, it seems to me, many of us err, is in ignoring the fact that the little ones, who daily come within our immediate circle, have their ideals regarding what a teacher should be. I believe that we can fail by leaving out of our consideration the child's idea of perfection, more than by falling short of our own high standard of longed-for attainments. The little child who leaves the atmosphere of home of necessity breathes an entirely different air at school. He has unconsciously grown into the home life, and fails to criticise there. But when he reaches school his natural intuition enables him to judge, with remarkable acuteness, of many things which are hidden from the teacher. The instructress appears to him as a very superior being. He cannot realise that she has any other life than the one in which he meets her, nor does any idea ever occur to him that she should possibly have any interests outside those which are paramount to him.

The ideal teacher is one who can put self completely aside, and with calm impartiality see through both the child's eye and the eye of her own ideal womanhood, and then act accordingly. The child's ideal of perfection, and often the youthful teacher's also, is a very human measure. The more mature instructress seeks to follow a standard of attainment which has never been endued with life, save in the great Teacher of Mankind.

Many excellent teachers seek to build the characters of the children for them, but the wiser ones endeavour to train the little ones to construct their own characters after the greatest model.

There are certain lines along which it is a teacher's duty to build character, as promptness in obedience, definiteness in carrying out instructions, etc. The very way a child is allowed to fold away his work, the manner in which he rises at his teacher's call, the air with which he addresses his instructress, all have great effect in moulding his character. One of Carlyle's thoughts has often caused me to meditate how very far I come behind my own ideal. It is given here in the hope that it may profit some one who may not have noticed it before:

"Thy life is no idle dream. It is all thou hast to front eternity with."

May we all endeavour to make the most of our opportunities in trying to grow, and in helping the children committed to our care to do likewise, in the direction of the truest and best characteristics.

Let us look for a few moments at what the child looks forward to, when coming to school, and then afterward at the qualifications which the teacher should have to meet these expectations.

"If there is anything that will endure
The eye of God, because it still is pure,
It is the spirit of a little child
Fresh from His hand and therefore undefiled."

We should guard well, for the little child, that empty storehouse he has—memory—since it in after life affords such great pain or pleasure.

1. *The child requires that his preceptress should be careful of her personal appearance.* No matter how careless a child may be about his own exterior, he sees no excuse for an untidy teacher. Example is much more forcible than precept in most things.

2. *Good pure English is required.* If a teacher is to command and retain the respect of her pupils, her speech should most certainly be such as will not offend the most fastidious ears.

"The deeds we do, the words we say
Into still air they seem to fleet;
We count them ever past
But they shall last,
In the dread judgment they and we shall meet."

3. *He expects absolute truth and sincerity from his teacher.* There is no excuse for deception. "Truth is always best, and he who speaks is blest." Once a child's implicit confidence is tampered with, his life becomes a misery, since he expects to be deceived by everybody at every turn. Half the irritability of childhood would vanish if "no" meant "no" from the very first until the last. Threatening comes under this heading also. Many a child is ruined by unfulfilled threats. At no time is the old rule for thinking thrice before speaking once as applicable as when dealing with little children.

"Seek the right though the wrong be tempting,
Speak Truth at any cost;
Vain is all weak exempting
When once the gem is lost."

4. *The child expects to be obedient.* Possibly at first shyness and reticence may overcome him, but that being conquered he will yield unquestioning obedience if the commands be reasonable and issued in the proper way. And it is quite within our possibilities to issue commands without arousing antagonism. For the most part children are rational creatures and yield readily if a co-operative spirit pervades the atmosphere.

5. *He expects amiability from the teacher.* Any exhibition of temper certainly creates a surprise. An ill-tempered person can make home most unpleasant, and if for grown people, how very disagreeable for the little ones if the teacher who should be the sunshine of the room gives way to irritability, to say nothing of ebullitions of temper. A fact that

comes painfully home to every conscientious teacher is that, if by any reason from outside circumstances one is not in the most enviable frame of mind, the little ones in charge somehow intuitively feel the unpleasantness and are correspondingly exasperating.

6. *The pupil does expect impartiality.* He respects those whose judgments are free from bias. Favouritism of any sort always arouses envy and creates trouble. Many children who put forth praiseworthy effort to overcome faults pass unnoticed, while those whose natural endowments preclude the necessity of mental exertion are made the recipients of considerable commendation. This should never be. The ideal teacher estimates the effort and not the success attendant on the endeavour.

7. *And last. He expects love.* Without it his school life is a blank. Love, the greatest thing in the world. Love is the fulfilment of the perfect ideal. Love should be the motive power of all our actions. Before it duty fades into insignificance. For the teacher love includes—

(*a*) *Patience*—at all times and under all circumstances.
(*b*) *Kindness*—even to the sacrifice of natural inclination.
(*c*) *Courtesy*—down to the poorest and least worthy of the scholars.
(*d*) *Good temper*—never even a hasty or harsh word.
(*e*) *Sincerity*—at every point.

It may not be easy to lavish love upon the dirty, disagreeable, ill-tempered child, but he undoubtedly is in greater need of it than any one else in the class. We cannot expect to conquer our aversions in a minute but we must try, try, and keep on trying. Practice invariably makes perfect, and if we remember that love begets love, we likely will soon find that cross disagreeable child transformed and become very dear to us. Let us remember that if we sow Love sparingly, we shall reap sparingly. If we sow Love bountifully we shall also reap bountifully.

"Give, give, be always giving
Who gives not is not living
The more we give, the more we live."

For a few moments let us consider the ideal teacher's endowments. Needless to say, every one of us has risen in the morning with aspirations towards our ideal, and has retired at night feeling that instead of approaching, one has almost been receding from, the standard. Sometimes I fear in the busy rush of life we neglect to daily measure our growth towards excellence. We forget that we are weaving a life pattern for our little ones to follow. Not for one moment do we cease, and while we ourselves may not be conscious of the design, those watching us judge and decide on it very carefully.

"We sleep, but the loom of life never stops; the pattern which was weaving when the sun went down, is weaving when it comes up tomorrow."

There are four great avenues of communication to be guarded—*the eye, the hand, the ear,* and *the voice.*

1. A teacher who has always been my guiding star, controlled absolutely by the eye. Had a pupil done wrong, her eye seemed to pierce the very soul. The look of sorrow which accompanied that penetrating glance seldom failed to bring repentance and desire never to again offend. When a child recognises that even if the visible organ in the teacher be beyond his range of sight, the eye of the teacher's heart perceives what is passing, then there is little likelihood that he will displease.

2. Margaret Sangster in one of her sweetest poems speaks of "The gentle touch of the hand". How much of love can be expressed by one caressing touch! How the little hearts respond to a loving pressure of the hand, even though the tongue be silent! One can almost catch the response from the little upturned face. Ah! where it is hard to love, hidden desires for improvement start into being with an appreciative touch.

3. Times there are when a teacher should be blind to what goes on in the schoolroom, and I believe almost as frequently we should be deaf to things we hear. Yet how careful we should be of the words which drop so carelessly from the children's lips. Can we ever teach them that sometimes "words wound more than swords"? Unkind, thoughtless, caustic, sarcastic words should find no place in either teacher's or scholar's vocabulary. Thought of consideration for others should early be infused into the youthful remembrance.

> "Oh! if we could but learn to know
> How swift and sure our words can go,
> How we would weigh with utmost care,
> Each thought before it sought the air,
> And only speak the words that move
> Like whitewinged messengers of love."

4. Certainly the voice is one of God's greatest gifts to man. He is able by its use to convey to others the thoughts evolved in his brain. The highest distinctive quality in the animal creation. And with that gift we make or mar ourselves. The tongue may be the instrument of greatest blessing to us and our surroundings, or it may be our curse. Real power comes naturally when control of the tongue has been gained. A low-pitched, even-tongued, melodious voice should be cultivated; nothing is more rasping than a high-pitched, strained tone. Many teachers begin well, but interest in the matter in hand tends to produce forgetfulness

of the pitch of the instrument of communication. Trouble then arises. The voice is usually the medium of disorder. A low firm tone will bring calm while a ruffled uneven voice will disturb.

I would like to impress one thought which should guide us in the line of discipline. Many times we are at a loss to know just how to act, and we let the chance, perhaps of a lifetime, slip by. May we not thus be entailing on the teacher next to us a very great deal of trouble and anxiety by failing to act decidedly?

May we in pursuit of our ideal womanhood not forget to look at matters from the child's view-point and remember to "put on Love which is the bond of perfectness".

"Nightly forbear to close thine eyes to rest
Ere thou hast questioned well thy conscious breast,
What sacred duty thou hast left undone,
What act committed that thou ought'st to shun.
And as Fair Truth or Error marks the deed
Let sweet applause or sharp reproach succeed.
So shall thy steps, while this great rule is thine,
Undevious lead in Virtue's path divine."

Benevolent Old Lady (to little boy in street)—"Why, why, little boy, how did you ever get such a black eye?"

Small Boy—"Me and Sammy Jones was fighting for a apple in school, an' he smashed me."

Benevolent Old Lady—"Dear! dear! And which glutton got the apple?"

Small Boy—"Teacher, ma'am."—*Harper's Weekly.*

And men relate the tale of a brave and resourceful little school teacher in one of our suburbs who supports her mother and three young sisters on her by no means munificent salary. Last week her mother called her up by telephone. "Listen," wailed the old lady, "a whole bunch of relatives is coming to supper to-morrow evening. I'll have to make a cake or something, and I haven't an egg in the house. And the grocer won't trust us any more, and there won't be any money until next week, and—"

"Never mind, mother, I'll fix it," answered the young teacher cheerfully. Then she turned again to her class.

"Now, children," she said, "to-morrow will be the beautiful story of Columbus and how he made the egg stand on end. Each of you will please bring an egg to school to-morrow. The class is dismissed."—*Cleveland Plain Dealer.*

Little Journeys to Rural Schools

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I.

HARTVILLE had a much-boasted-of rural school. My visit there was on one of those fine October days, when, Emerson says, "The very cattle lying on the ground seem to have great and tranquil thoughts". I got my dinner that Friday at Mr. Turner's. Mr. Turner had been trustee for 9 years. He was the heaviest tax-payer in the section, and took more interest in the school than any other citizen. In fact, he was one of those men on whom the success of any enterprise in the community mainly depends.

He had one son, a healthy, happy boy 12 years of age. I liked George at first sight. He talked straight from the shoulder, and made some remarks that set his listeners thinking. Few people possess that happy faculty.

"Well, George, how do you like your new teacher?" I asked him during the course of the dinner.

"She is a *dandy*."

"What do you mean when you say that a teacher is a *dandy*?"

"Miss White treats us mighty well when we are *good*; and she treats us even better when we are *bad*—and that makes us feel worse than if she gave us a *licking*."

Here was a new philosophy of discipline which, I thought to myself, might be worthy of careful consideration. However, until I have had time to experiment, I do not recommend it as a probable successful method of school management. In fact, I have about concluded that there are as many successful methods of school management as there are successful teachers. The management involves the entire relationship between the teacher and the pupils, which relationship is not identical in any two schools.

George and I walked over to the school together. I sat on the steps and watched the children at play. That has ever been one of my favourite pastimes—watching children play—listening to their unrestrained talk, and inferring therefrom their attitude towards their companions, their school, their studies, their teacher, their home, and the world in general.

As I sat there, on that fine October afternoon, I wondered whether it would not be possible to make all children's work just as intensely interesting as that game of ball; not by changing the nature of the work, but rather by changing the child's attitude towards the work by more skilful methods of assignment. The game that calls forth the child's highest skill is the game he most enjoys; and for that very reason many a so-called game proves of more educational value than many strictly orthodox lessons.

In the midst of my musing the teacher approached, and a group of eight or ten little girls ran forward to meet her. Each tried to hold her by the hand; but as the number of hands was limited to *two*, it was impossible to accommodate the entire group. What a privilege to win the love of large numbers of little children—the material that composes the Kingdom of Heaven! I wonder if many teachers even slightly appreciate this great privilege.

A "monitor" rang the bell, and the school assembled for the afternoon session. I introduced myself, and stated my desire to be a visitor for a portion of the afternoon.

"We always have special work on Friday," said the teacher.

"That will be quite as enjoyable as the *regular* kind," I replied.

The feature of the afternoon was "story telling". Every pupil told a story. The stories varied in length from one sentence in the lowest grade to several paragraphs in the highest. Nearly all the stories had been selected from the class readers; but there were four "special stories" taken from other books. These had been assigned to the four pupils, one from each of the senior divisions, who had told stories the *best* on the preceding Friday.

In some instances the children recited the stories almost verbatim. The boy who recited the best of all told the story, "How Poll was Found". He made the scene very real. The audience could picture

Poll sitting on his perch in front of the house, and calling out,—"Uncle! Uncle! How do you do to-day?" The audience could picture clearly the sorrow over Poll's loss and the joy that attended his recovery.

The pupils had evidently had thorough drill in this splendid exercise. I know of no other way in which a child can so readily acquire a vocabulary which he can put into immediate use. I suppose the children had heard those stories many times, but they all listened as eagerly as though they were hearing them for the first time. The same was true of the teacher, and I am quite disposed to think that the children were eagerly interested because the teacher was.

When I was about to leave, Miss White thanked me for my visit. "The children take so much more interest in our Friday afternoon work if we have a visitor. For that reason I sometimes make appointments with parents or older brothers or sisters to come in for a portion of the afternoon session."

Rural schools will fail to attain their highest efficiency or to confer their greatest benefit, until the parents co-operate, in the most hearty manner, in supporting and encouraging the efforts of the teacher. An institution is not helped so much by a liberal giving of money as it is by a liberal giving of our sympathy, our love, and our good-will. That is what the rural teacher needs to-day—the good-will, sympathy, and love of every member of the community. The preservation of the best things in the world to-day depends upon the preservation of the sanctity of the country home; and the influences which are to be exercised for that end can act most effectively through the medium of the rural school.

Joan was a most conscientious pupil, eight years old. During one of the school study periods the teacher noticed her searching a large atlas intently with a most puzzled expression. And after a few minutes she asked the child what she was looking for.

"Oh," said the anxious student, "Miss Kane said we were to find all the places spoken of in the history lesson on the map, and it says that 'Columbus was at the Point of Starvation,' and I can't find it anywheres!"—*Youth's Companion.*

Teacher (sternly)—Johnny, what is the matter with your eye? If you and Willie White have been fighting again I shall give each of you a good whipping.

Johnny (with the victor's generosity)—Yes'm. But you needn't mind about Bill; he's had his.—*Atlanta Georgian.*

History of Reading

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AT a recent meeting of the editorial staff of THE SCHOOL it was decided that brief résumés of the essential features of the different subjects of the public school course of study would be helpful to its readers. During the present volume of the magazine the subject of reading will be so treated.

Though the list of topics given below is of course subject to revision, the writer will in the main confine his attention to the following points:

1. A brief synopsis of the History of Reading.
2. The Reading Process.
3. Contributions of recent psychology to the subject of reading.
4. The Problem of primary reading.
5. Synthetic methods of teaching word-recognition with special emphasis given to phonic method.
6. Analytic-Synthetic methods of teaching word-recognition with special emphasis given to combination method.
7. Expressive reading in the primary grades.
8. Expressive reading in the upper grades.
9. The Mechanics of oral expression.
10. The Criterea of good reading and summary.

In the present treatment of the first of the above topics I claim no originality of authorship whatever. I have been guided wholly by what I have gleaned from books. In this connection I should make special mention of "The Psychology and Pedagogy of Reading", by Dr. E. B. Huey; published by Macmillan Co., of New York.

Reading and writing appear to be the inseparable properties of civilisation, for wherever a civilisation has developed, there too, to a corresponding degree, has developed reading and writing. From the time of the Babylonians who, according to Clodd, had passed the pictograph stage in these subjects at least 8,000 years ago down to that of our own North American Indians we see the same fact exemplified. But in the development of this perhaps most wonderful of arts the fact that is most astonishing and most noteworthy to me is that all these varied civilisations working independently of each other have given, at least in so far as they have gone, practically the same solution to the problem. For example, the initial stages passed through by the American Indians are almost identical with those passed through by the Egyptians or Babylonians of thousands of years ago.

Owing to this comparative agreement among all primitive peoples it will suffice to indicate in a general way the stages that have been passed through in the evolution of an alphabet. However, it does make a most interesting study to take the Egyptians, Chinese or any of the other individual nations concerned and note just wherein they differ from the general scheme herein outlined, to note the stage at which their development stopped short and to seek the cause of this arrested development. As a starting point for such study I know of no better book than the one mentioned above.

The following table will suggest in brief form the stages passed through in the evolution of the alphabet. It will also serve as an outline for what is to follow.

1. Pictograph stage.
   (*a*) Gesture Language.
   (*b*) Pictograph stage proper.
2. Ideograph stage.

Later in the development, systems of determinants were attached to the ideographic signs.

3. Phonogram stage—including the later stages of:
   (*a*) Rebus writing.
   (*b*) Acrology.
   (*c*) Analysis of syllables into elementary sounds.

1. Pictograph.

(*a*) Gesture Language. It is said that if you tie a Frenchman's hands behind his back you at the same time deprive him of his powers of conversation. Though only a saying, there is no gainsaying the fact that among certain modern civilised peoples the gesture language does play a large role in the communication of their ideas. Among primitive peoples whose vocabularies were inadequate to express their ideas its importance was greatly increased. So important was the gesture language among certain tribes that they found it impossible to communicate after dark. However, the point we wish to make is this, that in the interpretation of this gesture language (really pictures drawn in the air and read as fast as drawn) primitive man began his reading.

(*b*) Pictograph (proper). The gesture language—or drawing in the air—possesses the inherent advantage of being able to set forth thought with greater speed and fulness than picture writing as we think of it. But it is inferior to it in having to place the different elements of a sentence in succession, while by a picture the whole of an idea may be set in view at one glance and that *permanently* so as to serve as a message to a distant place or a record to a future time. In order to give this permanency to the ideas which they had heretofore expressed in gesture language we find primitive peoples resorting to picture writing. Their

drawings which were always representations of the objects of sense, were such as the children of our own day draw. *At first these drawings had no meaning beyond the object which they represented.* It is noteworthy that all primitive races have taken this step and that the pictures produced present a wonderful similarity. In these rude pictures of thousands of years ago lay the germs of the alphabets that have made civilization possible.

At this point I would like to digress in order to point out a couple of suggestions that occur to me. 1. Mankind began his reading with picture books just as the child likes to begin. It has always appeared to me that the picture as a basis of study has never received its fair share of importance. I hold that the extracting of the thought from a picture has infinitely more of the real and ultimate nature of reading in it than has nine-tenths of the stuff which commonly parades under that name. I further hold that the educative value of such work, whether judged by present or future results, far outweighs much of the work that is being done in reading in the primary grades. I would, therefore, advise most strongly that considerable of the time at present spent with the greatest of abstractions, viz., letters, their sounds, etc., be spent in the study of pictures suited to the mental capacity and interest of the child.

2. On the other hand, mankind began his writing with picture making. A short time ago a teacher who has a little girl in a Grade I. class told me that during a certain week in the month of June, 1913, his child had spent at least one-half of her school hours in the transcribing of words and letters. This is no myth; the previous prevalence of such work caused him to take cognisance during that week with the above result. That such conditions should exist in one of the most enlightened parts of our province in these days is an outrage on childhood and an insult to the teaching profession. Had one-fourth of the time spent in transcription been devoted to the drawing of pictures in which the child was endeavouring to represent whole ideas she would have been receiving a much truer education. Much of the other three-fourths of the time should have been spent in vitally awakening ideas which were capable of such representation.

2. Ideograph.

The pictures of primitive man did not long remain simply representations of objects of sense or pictographs proper. They came to represent ideas and feelings of the most-varied and abstract character, became in other words, ideographs. For example, combat was represented by two arrows pointed towards each other. For the Indians a red tomahawk meant war; a pipe meant peace; the sign for

morning was a long curved line representing the course of the sun and a short line indicating morning when at the left, midday when at the centre, and evening when at the right of this long line.

As these primitive peoples acquired versatility in the representation of these abstract ideas they began to disregard, in many cases, any attempted resemblance to the thing signified, and thus many of the characters became mere arbitrary signs. But with all their versatility and skill in the making of new characters their spoken language far outran their written language in development. As a result we find a condition arising which at one and the same time sounds the death-knell of solution along this line, and yet gives a clue to the only solution whereby written language may be made to keep pace with the spoken language. The condition was this. In order to make their written language keep pace with their spoken language they extended the meanings of the ideographs so that each ideograph would have several different meanings. Though this has the irremediable defect of utter confusion, yet it gives the suggestion that a character may stand for a word independent of that word's meaning.

However, they do cope with this confusion for a time and endeavour to overcome it by different systems of determinants which were attached to the ideographs. For example, for the Chinese the sign for white prefixed by the sign for tree meant "cypress", whereas with the sign for man it meant "elder brother". So, according to Clodd, the sign for tree had about nine hundred combinations to indicate the various kinds of trees, wood, and things made from wood. Though this system of determinants would save them for the time being, we can readily see that it would speedily become cumbersome, inadequate and end in the same utter confusion.

It may be of interest to know that most primitive peoples developed their written language to this point. Beyond it few of them were able to pass.

3. Phonogram.

All the words which we English people utter are expressed by the few sounds represented by the 26 characters of the alphabet. This fact is indirectly but persistently driven into the minds of our primary pupils so that even they must have some conception of its truth. To such a conception the mind of primitive man worked but slowly and with great difficulty, indeed, as we have previously indicated, was reached only by a few.

The one thing needful to help them out of the utter confusion into which their system of ideographic signs and determinants had landed them was some sort of graph which would represent to the eye the sounds

of the spoken language as sounds. As we have seen, the initial step towards this was taken when they made the same character stand for a number of different meanings. For example, we find the same character representing sun and son, or the same character representing right, rite, write. In other words, some of the characters became real phonograms, for they saw that a character might represent a sound independent of that sound's meaning.

(*a*) Rebus Writing. From the above they conceived the idea of representing the syllables of a polysyllabic word and later the words of a sentence by means of a succession of characters. This was the real origin of the rebus puzzles so common among children's games to-day, and so often found on the children's page of our daily papers, *e.g.*, the sentence, *I saw a man swallow a gooseberry*, can be represented by the picture of an eye, a saw, a man, etc. We see again that we have here the use of signs for word-sounds independently of any reference to the meanings.

(*b*) The next most important step in the development was to make the character stand, not for the whole word as was the case in rebus writing, but merely for the initial sound or syllable of the word. By this principle of acrology, as it is called, we see the first real attempts at breaking the word up into its elements.

(*c*) Analysis of syllable. From this on the evolution is perfectly natural. A further analysis of the syllable was made until the syllable was reduced to its elementary sounds. In the reaching of this final stage the Egyptians stood practically alone, the development among the other peoples being arrested at one or other of the above-mentioned stages. However, even the Egyptians did not produce an unencumbered alphabet. We are told that their alphabet was loaded down with all kinds of determinants and diacritic marks.

It remained for the Greeks and Romans to unload this useless material and give us the alphabet in a form similar to that which we now use.

The History of Reading from the time of the Romans is more or less bound up with the different methods used in the teaching of it. Since these methods will be discussed in future articles it is unnecessary to carry the present treatment of the subject farther.

Teacher—"What animal is it that has very strong limbs, a fierce temper, wild, bushy hair on its head, and is called the king of the beasts?"

Willie—"A football player."

Teacher—Haven't you studied your arithmetic lesson?

Scholar—No'am. I didn't have no time to learn nothing but my grammar lessons.—*La Follette's Weekly*.

A Lesson in Literature: "A Canadian Camping Song."

W. L. C. RICHARDSON
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A white tent pitched by a glassy lake,
Well under a shady tree
Or by rippling rills from the grand old hills,
Is the summer home for me.
I fear no blaze of the noontide rays,
For the woodland glades are mine,
The fragrant air, and that perfume rare,
The odour of forest pine.

A cooling plunge at the break of day,
A paddle, a row, or sail,
With always a fish for a mid-day dish,
And plenty of Adam's ale.
With rod or gun, or in hammock swung,
We glide through the pleasant days;
When darkness falls on our canvas walls,
We kindle the camp fire's blaze.

From out the gloom sails the silv'ry moon,
O'er forests dark and still,
Now far, now near, ever sad and clear
Comes the plaint of the whip-poor-will;
With song and laugh, and with kindly chaff,
We startle the birds above,
Then rest tired heads on our cedar beds,
To dream of the ones we love.

—*Sir J. D. Edgar: "This Canada of Ours."*

Aim.—(*a*) Enjoyment of a poem which pictures the delights of a Canadian summer spent in the woods.
(*b*) To increase the pupils' appreciation of "the simple life".

Preparation.—Awaken in the minds of your pupils ideas which are similar to the new ones to be presented. Some such process of preparation is vital and should not be trusted to chance. The following means are merely suggestive:

(*a*) Cut pictures of "vacation days spent in different parts of Canada" from magazines or from the illustrated sections of the newspapers. Let the pupils as well as the teacher question and comment on these freely for a few moments; or

(*b*) A brief discussion by the pupils as to the relative advantages of city and country for spending a summer vacation. Have them state reasons for their preferences; or

(*c*) Have different pupils who have spent part of their vacation camping narrate a day's events in the order in which they occurred, awakening some such train of ideas as the following: An early morning bath; a forenoon boating and fishing; preparing the fish for dinner; an afternoon hunting, reading; kindling the camp fire; evening's delights; restful sleep, pleasant dreams.

Presentation.—To-day we are going to enjoy a poem which deals with this very subject which we have been discussing. It has an added interest for us as it was written by a Canadian poet, the late Sir J. D. Edgar of the Province of Quebec.

The teacher reads the poem, bringing out as well as he can the pictures, the emotions and the thought. A study of the imagery follows the reading. Each pupil by the aid of his imagination should re-create the concrete ideas of the author. The vivid pictures should pass like a panorama:

Q. What two locations for a summer home are suggested?

A. (1) One by the lake shore. (2) Another in the mountains.

Q. Which would you prefer? Why?

Q. What expressions are there in the poem which enable you to form a picture of the first?

A. A white tent well under a shady tree, a glassy lake. Have pupils close their eyes and think of these things until they have combined the three elements into one definite picture.

Q. What expressions enable you to form quite a definite picture of the second?

A. Rippling rills, grand old hills, woodland glades, forest pine. Have pupils again endeavour to combine these elements into one picture. Now let us picture out the events of a day as it would probably be spent by the writer and his companions in a summer home amid such surroundings:

Q. At what time would they get up in the morning?

A. At break of day.

Q. What would they be likely to see at that time of day?

A. (1) First the grey light of morning. (2) Then huge beams of gold in the breaking clouds. (3) Followed by the magic hues that

paint the horizon as it begins to kindle in the east. (4) Rosy-tipt mountains. 5. Grass, flowers and foliage dripping with dew.

Q. What would they be likely to hear? *A.* Sweet songs of birds.

Q. What further description of the early morning could you give?

A. The air would be cool and fresh, and fragrant with the perfume of flowers and the odour of forest pine.

Q. How do you think all these things would make them feel?

A. They should experience a healthful thrill of pleasure in the beautiful things of nature.

Q. What did they do first? *A.* They went for a cooling plunge in the lake.

Q. What did they do after breakfast? *A.* They went boating.

Q. What else did they do while boating? *A.* Engaged in fishing.

Q. Why might they do this? *A.* (1) For the sake of the sport itself. (2) For the mid-day meal.

Q. What other suggestions are made for enjoying the day? Answer from the poem.

Q. What did they do when darkness came? (*A*) Kindled a camp fire.

Have pupils give all the information they can about how this is done and how the evening would probably be spent.

Near the beginning of the lesson you told me what the campers would be likely to see and hear at daybreak, and how these things would make them feel. Now I want you to tell me what they would be likely to see and hear as they sat around the camp fire after dark.

(*a*) Beyond the reach of the camp fire's light would be the long, deep shadows of the forest,—a solemn darkness.

(*b*) Over the top of the forest the weird light of the moon.

(*c*) The sad, plaintive cry of the whip-poor-will and perhaps the wilder, more piercing sound of the owl's long "too-hoo".

Q. What feelings would these sights and sounds induce? *A.* Solemnity and awe. These feelings of solemnity and awe are relieved by the sights and sounds of their more immediate surroundings, namely:

(*a*) The firelight dancing on the walls of the tent.

(*b*) The songs, laughter and merriment of the campers themselves.

Lastly, picture the scene of sweet repose which crowns the simple pleasures of the day.

Emphasise the simplicity, the lack of luxuries, of the life which affords such pleasure.

Q. What expressions particularly show that the writer would ask for no luxuries either in his summer home or in his manner of living?

(*a*) His home—"A white tent," "Cedar beds."

(*b*) "With always a fish for a mid-day dish. And plenty of Adam's ale."

Suggestions for B.B. Summary.—The leading thought and also the thoughts as expressed in individual stanzas should be asked for and expressed as concisely as possible. Let different pupils make their own statements but finally the best only should be chosen:—

SUGGESTED—"Pure delights of a Simple Life."

Stanza I.—Locations for living such a life.

Stanzas II and III.—The manner of life described.

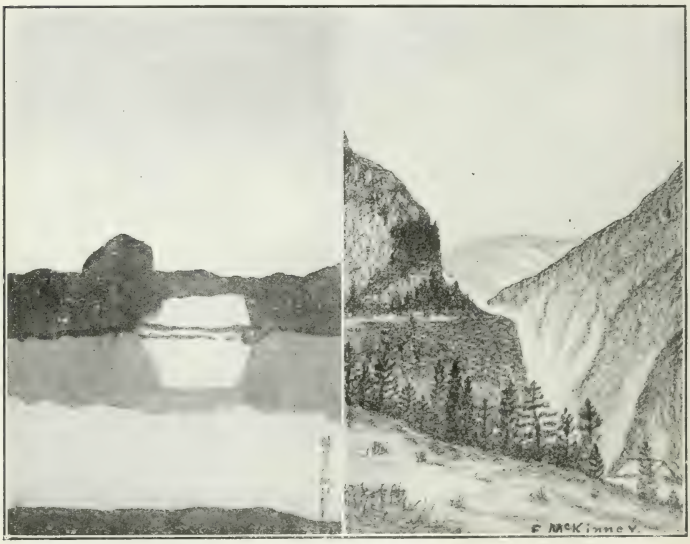


Fig. 1. Fig. 2.

Experiments made in connecting some of the handwork of boys 10 and 11 years old with their Literature. No. 1 was an attempt to express in colour the picture suggested in lines 1 and 2. No. 2 was sketched with lead pencil to represent the other suggested location for a summer home.

RETURN FROM THE CHILDREN:

1. The oral comment or immediate discussion that accompanied the presentation of the lesson.

2. Good oral reading.

3. The repetition of the poem from memory. Not to be recited once and forgotten. All memorized poems and reproduction stories should be called for from time to time as contributions to the pleasure of the whole class. Time is profitably given now and then to a regular story and verse tournament when the whole store of things acquired is brought out and enjoyed.

4. Connect some of the children's handwork with their literature. Let them try to realize some of their images in actual stuff, a picture, a bit of modelling, etc. For example, the illustrations accompanying this lesson were done by pupils first in colour, then with pencil, and what even greater opportunities for real pleasure are offered them in trying to realize their images from such lines as

(*a*) "When darkness falls on our canvas walls, We kindle the camp fire's blaze."

(*b*) "From out the gloom sails the silv'ry moon, O'er forests dark and still."

In the lower grades particularly, try the experiment of letting your girls actually make a cloak for "Little Red Riding Hood"; and your boys, a fairies' coach of a nutshell, a boat, a tent—or whatever object or property is imbedded in the story or poem you have taught.

CO-RELATION OF LITERATURE AND ART

In recent issues of THE SCHOOL references have been made to the very close relationship that exists between Literature and Art. In the April number a lesson was given showing how a picture study might serve as the basis of study of a poem, the subject in that instance being W. L. Taylor's representation of the scene in Tennyson's "Sweet and Low". In the June number Dr. Stevenson attacked the problem from just the opposite angle, showing how these two subjects may be co-related by having a boy sketch the scene after the literature of the lesson had been taught. In the present issue Mr. Richardson has followed out the same idea with a Junior III class.

Both these procedures should from time to time be followed, the latter of course being by all means the more frequent.

The real merits and value of such work are too self-evident to need any formulating here.

In the next number of THE SCHOOL Mr. Richardson will indicate briefly how to prepare pupils on the mechanical side for reproducing the pictures inspired by their Literature lessons.

A teacher in a western state was noted for his patriotic zeal. One day while hearing a class he was in a particularly enthusiastic frame of mind and turning to one of his pupils, a youngster of 12, he said:

"Now, James, tell us what you would think if you saw the Stars and Stripes waving proudly over the field of battle?"

"I should think," replied James, "that the wind was blowing."

Agriculture in the High Schools of Ontario

S. B. McCREADY, M.A.
Director, Elementary Agricultural Education

THE next ten years should show a large development of agricultural teaching in the High Schools of Canada. The generous provision of money made already by the Dominion Government this year through the Burrell Agricultural Instruction Act will enable and encourage the provinces to go forward in the undertaking. Moreover, if the recommendations of the Royal Commission on Industrial Training and Technical Education are acted upon, a widespread movement towards the establishment of rural High Schools should develop.

The teaching of agriculture in Ontario High Schools is not an unknown thing. For the past nine years the Elementary Science work of the Lower School has included not a little agricultural biology. Since 1907 the County Agricultural Representatives have carried out short courses at many schools and in some places taught the agricultural option in the Lower School Science throughout the year. Last year provision was made for giving science specialists the opportunity of taking the last two years of their University course in Science at the Agricultural College at Guelph, graduating with the degree of B.Sc. (Agr.); this preparatory to teaching agriculture in the High Schools.

Grants. –Special grants are given to teachers and School Boards where the work is introduced. The teacher's grant is $75.00 and, where a school farm or garden is carried on, an additional $25.00. The trustees are allowed up to $100.00 as a grant for meeting the expenses of the work and for the school farm or garden an additional $25.00. The regulations require that instruction in the class room be given for two hours each week and that the practical work carried on at home by the pupil be supervised by the teacher. For examination purposes the subject is a bonus in both the Lower and Middle School examinations.

Teacher-Training.—At the present time a class of twenty-one teachers is in attendance at the Agricultural College, taking the first summer session of a two summer session course which leads to the Intermediate Certificate in Agriculture. This year their instruction is chiefly confined to Botany, Physics, Entomology, Micro-Biology, Chemistry, Beekeeping and Poultry Husbandry. In the second year the work will be chiefly in Agriculture, Horticulture and Dairying.

The following outline shows the nature of the course taken this year:

This course is of such a nature as to train students efficiently for carrying on the teaching of agriculture in the High Schools.

The Chemistry consists of laboratory exercises on soils and fertilisers, relation of rotation to chemical changes. In Physics the mechanical principles involved in farm machinery are studied practically. Field surveying and measurement, taking levels, and making plans of drainage are treated, also the physical properties of soil. The botanical work deals with the economic plants, weeds, grasses, trees, etc. Plant diseases and weed seeds are investigated. The chief economic insects are identified and their life history traced where possible. Methods of combating the harmful ones are considered. The biology of moulds, mildews, yeasts and bacteria is pursued. Also the practical study of poultry, husbandry, and beekeeping.

The course of study in agriculture to be given in the High Schools is arranged somewhat similarly to that followed in Public School agriculture. The topics in the curriculum will be listed under the months of the years, and will cover all branches of work interesting and useful to the rural boy. It will extend over two years and will involve working both in the school and home garden.

Home Projects.—One of the chief features, if not the most important one, is the "home project" work which is to be undertaken. The list of these published in the departmental circular explaining the work will show how many valuable things there are connected with farm work and farm homes that lend themselves to educational direction. They are as follows:

On Gardening.—(1) To take charge of the home vegetable garden or part of it; (2) to establish, improve, or care for home lawns; (3) to grow one or more vegetables, such as tomatoes, beets, corn, or beans for canning; (4) to grow one flower and one vegetable in a pupils' competition; (5) to set out and care for strawberry, raspberry, or asparagus bed; (6) to set out and care for a row of currants, or gooseberries; (7) to establish a permanent border; (8) to set out and train climbing rose, Boston ivy or other climbers; (9) to test two varieties of a vegetable, such as arranged for by the Schools' Division of the Experimental Union; (11) to grow new kinds of vegetables; (11) to improve the back yard with grass plots, flower borders and climbers on the fences; (12) to establish a wild flower garden at home.

On Fruit Growing, Nursery Work, etc.—(1) To renovate an old orchard or part of it; (2) to set out and care for one or more fruit trees or grape-vines; (3) to care for one or more trees by pruning, scraping, spraying and cultivating; (4) to experiment on thinning out fruit on heavily bearing tree; (5) to produce one's own fruit trees by raising seedlings and grafting on roots or budding; (6) to propagate currants, gooseberries and grape vines from cuttings; (7) to raise shade trees from seeds and nuts, *e.g.*, horse chestnuts, oaks, hickories, walnuts, oaks, maples, elms; (8) to pro-

pagate ornamental shrubbery, such as privet, bush hydrangea, roses, etc., from cuttings; (9) to buy ornamental shrubbery of one-year stock and care for it in nursery lines until large enough to set out; (10) to get young evergreen and other tree seedlings from the woods and bring on in nursery lines to prepare for home planting; (11) to get a colony of bees and learn to handle it.

On Production of Field Crops, Home Grown Seeds, etc.—(1) To compare thick and thin seeding of some common field crop; (2) to compare results from different dates of seeding; (3) to compare yields from same weights of large and small seed; (4) to compare yields resulting from different depths or different number of times of cultivation, say, of corn; (5) to compare yields resulting from uses of different mixtures of chemical fertilizers; (6) to produce one's own mangel, turnip, or carrot seed; (7) to test and introduce a new variety of grain, alfalfa, clover, potato or other crop, such as is recommended by the experimental stations; (8) to enter local competition in obtaining the best yields from one-tenth acre of corn, potatoes, turnips, etc.

On Crop and Live Stock Improvement.—(1) To join the Canadian Seed Growers' Association and commence practical seed selection and improvement; (2) to enter one of the Field Crop Competitions organised by the Ontario Department of Agriculture; (3) to undertake one of the experiments offered by the Experimental Union, comparing approved varieties of oats, barley, potatoes, etc.; (4) to commence the selection of best hills of potatoes, best head of corn, best head of oats and growing crops from these; (5) to purchase choice seed from a leading seed grower for comparing with home grown seed; (6) to secure eggs of some improved strain of poultry (e.g. O.A.C. Barred Rocks) and build up a pure flock; (7) to make individual milk tests for the home dairy herd in order to find out which cows should be retained.

On Farm Management and Improvement.—(1) To make a complete valuation of the farm and all its equipment, buildings, fences, drains, machinery, live stock, feed, fields and orchards; (2) to estimate the cost of producing the different crops grown, keeping accounts for each field; (3) to estimate the cost of raising pigs, chickens, cattle, sheep or horses; (4) to estimate the cost of producing milk and butter; (5) to carry out a system of book-keeping for the farm for a year; (6) to make a drainage survey of the farm with map showing location of old drains and new drains required; (7) to test a scheme of cultivation for the eradication of weed pest in a field; (8) to use split-log drag for improvement of roads about and on the farm; (9) to make a survey of the home woods, estimating the amount of mature or spoiling wood available for lumber or firewood and making plans for restoration or improvement; (10) to conduct an experiment to find the results of following a system of rotation; (11) to establish

an agricultural library or book-shelf, furnishing it with government bulletins or a select number of standard books; (12) to put together in a scrap book or portfolio, cuttings from the agricultural press dealing with any particular line of work in which one's practical interest lies, *e.g.*, poultry keeping, beekeeping, gardening, dairying.

On Farm Mechanics, Home Carpentry, etc.—(1) To make utensils required on farm or in home, *e.g.*, wood-box, book-shelf, milk-stool, saw-horse, poultry feed boxes, butter worker; (2) to put down cement sidewalks about home, making cement fence posts, water troughs, etc.; (3) to use farmer's hand forge and learn to make simple blacksmithing repairs, (4) to build, repair and readjust all farm gates; (5) to repair barns and sheds, replacing broken windows, floors, partitions, steps, etc.; (6) to plan, make out bill for material, purchase, and build new poultry house, pig-pen or shed; (7) to build in new ventilators in stables.

"Now, Jeannette," said the Sunday School teacher to a small student, "can you tell me why God gave Moses the rod?"

"Yes, ma'am," replied Jeannette, "so he could chastise the children of Israel if they didn't get their lessons."—*New York Globe.*

Teacher (to pupil)—What are you laughing at? Not at me? Pupil —Oh, no, sir! Teacher—Then what else is there in the room to laugh at?—*Exchange.*

"Why did Atlas have to support the earth?"

"He didn't have to; he was just practising his athletic culture lesson. —*Denver Times.*

Johnny's teacher had tried in vain to impress upon his mind that it was incorrect to say "have went". As a last resort she told him to remain after school and write upon the blackboard 100 times the words "I have gone".

When after much effort the laborious task was completed Johnny waited for the teacher, who had left the room, to return. Finally in desperation he wrote beneath his completed task:

"Miss Smith, I have wrote 'I have gone' 100 times and have went home."

"Freddy, you shouldn't laugh out loud in the school room," exclaimed the teacher.

"I didn't mean to do it," apologized Freddy. "I was smiling, when all of a sudden the smile bu'sted."—*Burlington Gazette.*

Current Events

The Second Balkan War.—As we expected, the Balkan allies, having defeated Turkey, were unable to divide the spoils without quarrelling among themselves. Greece refused to lay down her arms until she got further recognition of her claims than the Treaty of London gave. Servia, too, felt that Bulgaria was getting more than the lion's share. Bulgaria, flushed with the triumph of her leadership against Turkey, was prepared to carry things with a high hand.

The month of warfare that resulted is said to have been even more ferocious than that against Turkey. To the astonishment of Bulgaria, her forces were speedily overwhelmed by the united forces of Greece and Servia, while on the East she was invaded by Roumania who, though only a sympathetic onlooker in the struggle against Turkey, got as the reward of her sympathy a substantial increase of territory.

The treaty that ended the war amongst the allies was signed at Bucharest, August 9th. By it Servia goes farther south, and gets the town of Monastir. Greece extends farther along the Aegean Sea and includes the Port of Salonica. Turkey, which had seized the opportunity to reconquer Adrianople, is ordered to withdraw to the original lines of the Treaty of London.

One important outcome of the war is the deposition of Bulgaria from the leadership of the Balkan States. Her place will probably be taken by Roumania. A Balkan league is still possible.

Revolutions in Mexico.—The United Mexican States, commonly called Mexico, are still (August 10th) without a generally recognised government. In May, 1911, Porfirio Diaz, who had for 27 years been President of Mexico, was overthrown by a revolution, headed by Francisco Madero. The rule of President Diaz had been progressive, but personal and autocratic. Madero, elected president almost unanimously in October, 1911, never succeeded in his attempt to govern by more constitutional means. He never made himself master of all Mexico. At last in February, 1913, his opponents under Felix Diaz, a nephew of the former president, were joined by General Huerta, on whom Madero had counted for support. After a prolonged struggle in the streets of Mexico, Madero was captured by the rebels, February 18th. The next day General Huerta was proclaimed provisional president. Three days later the world was shocked to hear of the death of ex-President Madero. The statement issued by General Huerta was that Madero had been shot by the guard while attempting to escape. The statement was not convincing.

Doubtless owing to the feeling that no impartial investigation of Madero's death was made and that Huerta had not made good his position as the choice of the Mexican people, the United States has withheld recognition of Huerta's government. Other states have recognised him provisionally on the understanding that a free election will soon be held.

In many states of Mexico rebels are still in arms against his government, The total population of the twenty-seven states that make up Mexico is over fifteen million, twice the population of Canada. But of this fifteen millions nearly forty per cent. are Indians.

The interest of other countries in the affairs of Mexico is very great, as during the long rule of President Diaz millions of foreign capital were invested there. So strong is the feeling that some end must be put to the unsettled conditions of the last three years, that many have urged intervention by the United States. But the suggestion even of friendly mediation between himself and the rebels is vigorously opposed by General Huerta. President Wilson has sent ex-Governor Lind as a special adviser to the American representative in Mexico in the hope that some peaceful settlement may be found. Forcible intervention would probably mean a temporary conquest of Mexico by American armies such as was undertaken in Cuba, and this President Wilson would consider only as a last resort.

Teacher—Johnnie, what was the most ferocious animal you saw in the circus parade?

Johnnie—The calliope.—*New York Globe.*

A school boy's composition on "The Editor" ran as follows: "The editor is one of the happiest beggars in the world. He can go to the circus in the afternoon and evening without paying a farthing, also inquests and hangings. He has free tickets to the theatres, gets wedding cake (?) sent to him and sometimes gets licked, but not often, as he can take it back in the next issue which he generally does. While other folks have to go to bed early, the editor can sit up every night and see all that is going on."—*Grand Rapids Reporter.*

"Now boys," queried the teacher, "who can tell me anything about the dead languages?"

"They are languages that were killed by being studied too hard," answered the boy at the foot of the class.—*Chicago News.*

Teacher—Johnny, what is a skeleton?

Johnny—Please, ma'am, it's a man with his insides out, and his outsides off.

Getting Started in the Art Class

S. W. PERRY, B.A.
Faculty of Education, University of Toronto

A NEW form, a new teacher, a subject brimming with interest, yet bristling with difficulties. How perplexing the situation! No text-book "for lessons". No course outlined for the teacher's guidance. So much left to his judgment. And rightly so. For in art education the personality of the skilful teacher counts for much more than the lessons contained in any set of drawing books.

In a subject requiring the handling of so much material, the teacher should have a carefully thought-out system of identifying, distributing, collecting and storing it. To avoid confusion and delay the class should be organised to assist in the collecting and distribution of water bottles, colour boxes, drawing books, drawing boards, etc., and as much of the system explained as the pupils should know.

While it will be necessary to undertake a short review to recall forgotten lessons, the charm of a new interest should be added by a wise and varied selection of new subjects for study.

In this month nature abounds in suggestions for the art teacher. After school, accompanied by as many of the class as can go, visit some neglected spot where Nature runs riot. Willing hands will cull a multitude of specimens for the impending (!) art class. In fact, the enthusiasm of youth must be curbed, or the schoolroom will become the storehouse of much useless material. A part of the art lessons lies just here, in teaching pupils to see, to select and to care for the beautiful. Only wild plant specimens should be collected on this trip, fruit sprays should be left for the next. Reject all material unsuited to the purposes of the lesson, either for lack of interest or for its difficulty. This implies that from conversation with your pupils and from an examination of last year's drawings you have made up your mind about the character of the intended review. After loosely arranging your material to freshen in a pail of water, you go home to plan your lesson. According to the state of advancement of your pupils, you will divide the available material and plan a lesson something like one of the following:

Class I.

Subject.—Hungarian grass, garden grass, oat stalk, or a sedge.

Medium.—Brush and ink.

Aim of the Lesson.—To secure freedom in handling the brush, making each stem or leaf in a single stroke, lifting the brush to the point for thin lines and pressing on the brush to get the broad parts of the blades, making pleasing unions of blades and stem.

Note.—Any one of these makes an excellent study for a pencil sketch. Set the faster and brighter pupils to do both.

CLASS II.

Subject.—Bulrush in head, or milkweed in pod.

Medium.—Brush and ink.

Aim of the Lesson.—To secure greater freedom in handling the brush, filling-in fruit, stem and leaf with two or more strokes of the brush, painting leaves that twist or expose front and back to view. Paint in two tones.

Note.—Either of these also makes a fine study for a pencil sketch.

Fig. 1. Fig. 2.

CLASS III.

Subject.—Cone Flower, Bur Marigold, or spray of Wild Rose with Hips.

Mediums.—Pencil, Pen and India Ink, and Water Colours.

Aim of the Lesson.—

(1) To draw the study in unaccented line in pencil and in pen and ink.

(2) To lay over this a light gray wash.

(3) To paint the study within the inked lines in flat tones.

Note.—This work will require two lessons.

Class IV.

Subject.—Golden Rod, Closed Blue Gentian, or Swamp Thistle.

Mediums.—Pencil and Water Colours.

Aim of the Lesson.—

(1) To draw the study in pencil in accented line, making the drawing expressive of tones of colour and texture as well as of form.

(2) To paint on an appropriately graded background the study chosen, in natural tones and hues.

Note.—This will require at least two lessons.

Fig. 3. Fig. 4.

The art period has arrived. Every one is expectant. Quietly and quickly the material has been distributed by the proper assistants. Each pupil has a specimen of the group chosen for the lesson. The procedure may now take the following course:

(1) Show how in many instances the luxuriance of nature must be pruned. "The characteristic of art is *selection*, while that of nature is abundance." Allow each pupil to trim to pleasing form his own specimen.

(2) Have each pupil lay out, with or without the aid of a "finder", the proper arrangement for his drawing, so that the masses, lines and

spaces may have a pleasing relation to one another and to the enclosing lines. If the specimens used are large, a few should be properly mounted before the class. The smaller specimens should be mounted temporarily on sheets of paper or cardboard by means of pins or thin strips of passe-partout. All these exercises have an intimate connection with the art lesson. The teacher who, "to save time", trims and mounts the specimens before he meets his class, not only gives himself unnecessary labour, but has robbed his class of the joys that come from artistic performance.

(3) By demonstration sketches on the blackboard, or preferably on a sheet of white paper and with the same medium used by the pupils, the teacher should clearly indicate what he expects his class to do. There is a greater danger of doing too much, than too little, drawing, and of the pupils copying the teacher's drawing instead of the subject before them. Rapid trips from desk to desk with words of encouragement, or suggestion, and here and there a correction, will be rewarded with creditable drawings from most, if not from all.

(4) Be sure to have them mount and place on exhibition their work.

The lesson period is over. The next will not be so perplexing. Experience has proven that the method here outlined (*a*) strengthens the bond of sympathy between pupil and teacher and solves many problems of discipline, (*b*) creates a deep interest in the art lesson, and (*c*) develops the power of seeing and expressing beauty which is the aim of the course in art.

A BRIEF PICTURE STUDY

Our frontispiece, "The Little Scholar", is reproduced from a Perry Picture photographed from a painting by William Bourguereau, a French artist (1825-1095). Although he was a portrait painter, he won considerable prominence by painting figures representative of ideal subjects.

This picture of childhood possesses a deep human interest during these first days at school after the long vacation. Whither is she going? Why is she represented with basket and book? Does she dislike her book? How do you know? At whom or at what is she looking? Can you name and account for the character of her gaze? Can you tell the time of day by the position of the light and shade? What story does the artist tell you by his picture?

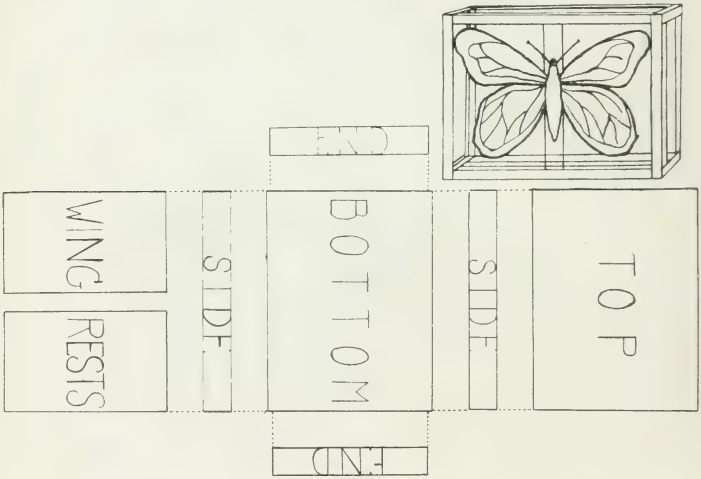
"Now, children," said the Sunday School teacher to the juvenile class, "can any of you tell me what an epistle is?"

"I can," answered the little fellow at the foot of the class. "An epistle is the wife of an apostle."—*Los Angeles Express.*

Suggestions for the Class-room

Mounting a Butterfly.—The question that arises in the mind of the young naturalist in making Nature Study collections is, "How shall I preserve my specimens for future study?" Many have experimented and have been disappointed in their attempts. The method herein prescribed for mounting butterflies, moths, dragon-flies or any insects with flexible wings, has appealed to some of our students and we gladly offer the result of our experiment to our co-workers.

Since the natural beauty of the butterfly or moth depends largely upon the scales on its wings, special care must be taken to avoid touching these delicate parts. The insect may be caught in a net and killed in a poison bottle. If spreading cannot be done immediately after it dies, the body and wings may be relaxed by being placed near a damp cloth in a covered vessel for two days.



For spreading, lay the insect on its back on a piece of board. Draw the front wings forward in such a manner that the back margins of these wings are at right angles to the body. An insect pin may be put through the upper margin of each front wing. The hind wing should then be moved forward, its front margin lying under the opposing margin of the front wing. When the wings have thus been adjusted in the position which they are to occupy, strips of glass may be laid on them to keep them perfectly flat. To keep the body in position place a pin on each side but not through the body. The antennae may be held in their natural position by crossing pins diagonally over each of them. It is necessary

to leave the specimen four or five days until thoroughly dry to prevent mildew after it is mounted.

The mounting box is made entirely of glass, the pieces being fastened together with passe-partout. Measure the length and width of the butterfly and have two pieces of glass cut two centimetres longer and wider than the insect for the top and bottom of the glass. For the sides, have two pieces the length of the box and fifteen millimetres in height. These pieces should be set up on the bottom piece and the distance measured between them to calculate the lengths of the ends, which should be the same height as the sides. The wing rests consist of two pieces of glass with a space between them, sufficiently wide to insert the body of the insect. Drawings of the exact size of the different pieces of the box may be made on paper and used as models for cutting the glass. Thin glass may be procured and cut in the desired lengths at a hardware store. The glass should be well cleaned before passe-partouting.

In selecting passe-partout choose the colour which will show to advantage the markings on the butterfly and cut it about a centimetre in width. After cutting the passe-partout the required length, immerse it in warm water and draw the gummed side over the edge of the vessel to remove any surplus moisture. The ungummed side of the passe-partout may be placed on blotting paper. The pieces of glass should be applied to the passe-partout while it is flat on the blotting paper. When the wing rests are in place and the insect in position with the body inserted in the opening, the cover of the box may be put on and sealed with passe-partout.

This method of mounting has many advantages. As the box is tightly sealed, it is impossible for any insect pests or dust to injure the specimen. The insect may be placed in the hands of the pupil and be examined from all sides without marring in any way its beauty.

—*By a Summer School Student in Elementary Science.*

New Style of Numeral Frame.—Inspector P. H. Thibaudeau, of Lacombe, Alta., has given us the privilege of examining a new style of numeral frame which he has adapted from the one formerly in use. He has added a number of wires and balls, and has used balls of various colours. This frame has, on account of these additions, a distinct advantage over the old style. By its use the earlier steps in the four elementary branches of arithmetic will be simplified. It may be used for division and multiplication, as well as for addition and subtraction. It is a good object to have before the beginner in notation. It does not, of course, supersede the use of money and kindred material in giving adequate perception and illustration of number, but when used along with these it should be valuable to the Primary teacher.

Hints for the Library

Les Aventures de Maitre Renaud.—Edited by Marc Ceppi. 88 pages. Cloth. One shilling. Edward Arnold, London. A reader containing a number of the most interesting adventures of Maitre Renaud, retold in very easy French. It aims to train junior pupils in the use of tenses and provides an abundance of idioms. The illustrations supply material for oral exercises. An excellent book for young students. W. J. D.

Piers' Plowman Histories.—General Editor, E. H. Spalding, M.A. George Philip & Son, London. In the opinion of the present reviewer, these books are "just the thing" for teaching the History outlined for Public Schools in Ontario. The Junior Series begins with a reader consisting chiefly of illustrations suitable for Primer classes. The other books make easy reading for each form in turn. The Senior Series, for teachers, is parallel with the Junior and furnishes material for oral lessons. The prices are moderate, from 9d. to 1s. 8d. for the Junior books, and 5s. for the Senior. Some of the points of excellence about these history books are: (1) The attention given to the everyday life of the people. (2) The adaptation of the material to the interests of the child in the different stages. (3) The opportunity afforded pupils for independent reading. (4) The character and the abundance of the illustrations. These books should make an excellent addition to the School Library. W. J. D.

Elements of Geography.—By Salisbury, Barrows and Tower. 616 pages. Published by Henry Holt and Company, New York. This book, written by members of the University of Chicago, is along new lines which are to be recommended. It combines Physical and Commercial Geography, showing how closely the physical determines the commercial. It can be highly recommended to all teachers of both High and Public Schools as a work that will stimulate new force in their geography teaching. G. A. CO.

A High School Course in Physics.—By F. R. Gorton. 482 pages. D. Appleton and Co., New York. I put this book together with two others of the same scope in the hands of a student at the Summer School. This teacher was studying the Middle School work in physics largely by herself and using our apparatus for experiments. Although the other two texts were the ones most used, probably of any, in Ontario, she said that the one under review always cleared up her difficulties best. This is the highest recommendation I can give the book.

G. A. CO.

Notes and News

Dr. John Waugh, M.A., formerly Inspector of Continuation Schools, has been appointed Chief Inspector of Schools for Ontario, in succession to Mr. R. H. Cowley, M.A., now Chief Inspector of Public Schools, Toronto.

Mr. J. P. Hoag, M.A., of London Normal School, has been appointed an Inspector of Continuation Schools for Ontario.

Inspector E. T. White, B.A., of Pembroke, has been appointed to the staff of the London Normal School as Instructor in Mathematics.

The High and Public School Courses of Study are now under revision by the Department of Education. It is anticipated that the revised Syllabus in each case will be ready for the opening of the schools in September.

Summer Model Schools were held during July and August at Bracebridge, Gore Bay, Ottawa, Port Arthur, Sharbot Lake and Sturgeon Falls.

Mr. Cecil L. Mackenzie, for some years Principal of the Collingwood Public Schools, has been appointed Principal of Orillia Model School.

An interesting feature of the Old Boys' Reunion, Aylmer, was the presentation, by former and present students, of a purse of nearly one thousand dollars to Principal W. W. Rutherford of the Collegiate Institute.

Mr. Gordon Manning, B.A., of Lindsay Collegiate Institute, has been appointed Instructor in History in the University Schools, Toronto.

Miss Lena Dufton, B.A., of Vankleek Hill Collegiate Institute, will teach classics in Listowel High School this year.

Miss Annie Windsor, B.A., of Athens High School, has been appointed Principal of the High School in Deseronto.

Mr. J. B. Wallace, B.A., a graduate this year of the Faculty of Education, has been appointed an Instructor in Moderns in the University Schools, Toronto.

The School of Commerce, Accounts and Finance of the New York University has just introduced a course in shorthand for business men and prospective teachers. The Isaac Pitman text-books are used, and the course is practical in the best sense of the term.

In our article on "The Red River Rebellion" which ran serially in several issues last year, an error was made with reference to the reporters who "covered" the Rebellion. It may be interesting to students of the history of our own day to know that Mr. John Ross Robertson, now proprietor of the *Evening Telegram*, at that time represented the Toronto *Daily Telegraph* and not the *Globe*. The *Daily Telegraph* of the date did very effective work in reporting the news from that far-off region.

Mr. P. M. Thompson, M.A., formerly of Welland, has been appointed to Windsor Collegiate Institute to take charge of the Upper School Science.

The Board of Education in Windsor has arranged to carry on evening Industrial Classes during the coming winter. Principal Gavin of the Collegiate Institute will have charge of this work, and instruction will be given in mechanical drawing, woodworking, mathematics, domestic science, dress-making and millinery. Classes will be held in the Collegiate Institute and in two of the Public Schools.

Miss Jessie Houston, B.A., of Strathroy, has been appointed to the Chatham Collegiate Institute.

Miss H. M. Gundry, B.A., is now Principal of Wardsville High School.

Mr. J. G. Althouse, B.A., a recent graduate of the Faculty of Education, Toronto, will teach classics this year in Strathroy Collegiate Institute; and Miss L. C. Henry, B.A., of Parkhill, will have charge of the Moderns Department.

Miss Galloway, B.A., Toronto, will teach Moderns this year in Parkhill High School.

Miss Martin, B.A., of this year's class in the Faculty of Education, Toronto, has been appointed to teach Moderns in Aylmer High School, in place of Miss S. G. Story, resigned.

Mr. H. Bonis, B.A., formerly Principal of Listowel High School, has been appointed Principal of the High School in Dunnville.

Mr. J. P. Cowles, B.A., of Dunnville, has removed to Western Canada.

Mr. H. E. Elliott, B.A., formerly Principal of Deseronto High School, is now Principal of the High School in Listowel.

Mr. W. R. Saunders, B.A., of Humberside Collegiate Institute, Toronto, has been appointed to the Technical High School.

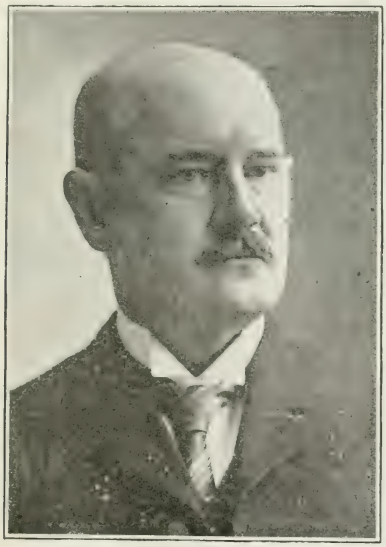
Mr. A. M. Patterson, M.A., of Jarvis Street Collegiate, has been transferred to Humberside Collegiate. Mr. Allin, B.A., a graduate of the Faculty of Education, Toronto, will teach in Jarvis Street Collegiate.

Mr. G. F. Rogers, B.A., who has been Principal of Seaforth Collegiate Institute since 1900, has accepted the Principalship of North Bay High School at an increased salary.

Mr. J. R. Tuck, M.A., of Niagara Falls Collegiate Institute, has been appointed to the Science Department of the Normal School at Camrose, Alta.

The *Weyburn Review* of July 30th contains an item descriptive of the result of the yearly Penmanship Competition in Inspector Kennedy's district. Thirty pupils in the inspectorate received awards. An interesting feature of the requirements is that each competitor was asked to exhibit a copy of the prescribed work for each month that

school was in operation. "The competition in writing inaugurated last fall by the Weyburn Security Bank closed July 15th, and the different exhibits were submitted to the judges chosen by General Manager Powell on Saturday last. There are twelve divisions in the Weyburn inspectorate, and from six of these entries were received. The judges were Messrs. A. Kennedy, H. Oft, and T. M. Marshall, and the task was no light one, as many of the schools had many entries. The most complete and most systematically arranged exhibit was that of the Estevan Schools, under the Principalship of Mr. Chisholm, though the exhibit put in by the pupils of Miss A. Shaw, of Weyburn Schools, was also worthy of notice."



MR. R. H. COWLEY, M.A.
Recently appointed Chief Inspector of the Toronto Public Schools, to succeed Dr. James L. Hughes.

The Autumn Model Schools opened on Tuesday, August 19th, at Chatham, Clinton, Cornwall, Guelph, Hanover, Kingston, Madoc, North Bay, Orillia, Peterborough, and Renfrew. The session ends on December 12th.

Mr. Arthur G. Hooper, M.A., formerly Classical Master in the Strathroy Collegiate Institute, has accepted a similar position in Lindsay.

Mr. F. J. A. Morris, B.A., of the teaching staff of the Port Hope High School, has been appointed to the staff of the Peterboro Collegiate Institute.

Mr. J. Murray Wilson, Principal of Picton Public School, has resigned to accept a similar position at Prince Albert, Sask.

Mr. N. Ostrander has been appointed Principal of the Public School at Hastings.

Mr. T. E. Langford, M.A., formerly of Arthur, has been appointed Principal of the Smithville High School in succession to Mr. James Tremeer, B.A.

Mr. G. A. Fergusson, B.A., of Peterboro Collegiate staff, goes to Britannia High School, Vancouver, B.C.

Mr. James Stalker, of Wingham Public School, has been appointed principal of the Public School in Ingersoll.

Miss Marie Oldfield, of Dutton, has been appointed assistant in the Smithville High School, in place of Miss Olive MacKay, B.A., who has received an appointment to the staff of Vankleek Hill College Institute.

Miss Isabella K. Smith, B.A., of Newmarket, will teach Moderns and English in Bowmanville High School this year.

Mr. John Elliott, B.A., Principal of Bowmanville High School, has been appointed to the staff of the London Collegiate Institute, and is succeeded by Dr. J. B. Dandeno, M.A.

The following appointments have been made in Fort William to the High School Staff: Mr. Chas. Tebbutt, of Goderich, Manual Training; Miss Miller, Toronto, Domestic Science; Miss Mabel M. J. Baird, Toronto, Moderns and History. To the Public School Staff: Mr. Edgar Eade, West Hill; Mr. A. E. Southon, Colborne; Miss Clare Touchette, and Miss Bessie Adams, Fort William; Miss Vida McAuley and Miss M. E. Ralston, Orillia; Miss Lois MacLachlan, Norwich; Miss Jessie McPherson, Thorold; and Miss Bertha Hellens, Kingsville.

The vacancy on the staff of the Petrolea High School, caused by the resignation of Mr. Bruce E. Leckie, B.A., has been filled by the appointment of Mr. E. P. Hodgins, M.A.

The position of Principal of the High and Public Schools of Manitou, Manitoba, has been filled by the appointment of Mr. William Y. McLeish, formerly of Andrew, Alta.

Miss I. M. Leacock has been appointed Moderns Teacher in the Beamsville High School, in place of Miss Marion Cline, resigned.

Mr. R. Watson Scott, M.A., F.C.S., of St. John's College, Winnipeg, has been appointed Science Teacher in Nelson, B.C., in succession to Mr. Wm. Gray, M.A.

Miss Eva M. Coulter, B.A., of St. Thomas, has been appointed Moderns Teacher in Dutton High School in succession to Miss Gertrude Platt, B.A.

Peter Sandiford, M.Sc., Ph.D., of the Department of Education, University of Manchester, has just been appointed to the chair in Education, University of Toronto, vacated by Professor Coleman. Dr. Sandiford, who was born in 1882, is B.Sc. and M.Sc. of the University of Manchester, with scholarships and high honours. He holds also a Doctor's degree in Education from Teachers' College, Columbia. He has been assistant master and superintendent in the Fielden Demonstration School, Manchester, and supervisor of practice teaching in the Speyer School, Teachers' College, New York. He has been a lecturer in Education in Nebraska University, Columbia University and Manchester University. In the field of authorship he has collaborated with Professors Sadler, Marshall and Findlay in treatises upon Continuation Schools, the Teaching of Science, and a Scientific Method in Education. He has himself published an Educational Psychology and a standard text on the training of Teachers in England and Wales.

PROFESSOR SANDIFORD

Dr. Sandiford comes to Toronto with the warm endorsation of such men as Dean Russell and Professor Sykes of Columbia, Vice-Chancellor Sir Alfred Hopkinson and Prof. Findlay of Manchester, and Vice-Chancellor M. E. Sadler of Leeds. He brings to his work here high scholarship, the skill of the investigator, experience in schoolroom practices and, in particular, a first-hand knowledge of English and American methods in education.

SASKATCHEWAN.

Mr. A. W. Keith, formerly Principal of the Estevan High School, has been appointed Inspector of Schools in the Rosthern district.

Mr. G. D. Ralston, formerly Principal of the Moosomin High School, entered upon his duties as Inspector of Schools at Maple Creek on July 1.

Mr. Norman M. McLeod, B.A., Principal of the High School at Arcola, Sask., has been appointed a member of the staff of the Collegiate Institute, Regina.

Miss L. M. Handy, B.A., also of the Arcola High School, has been appointed to the staff of the Collegiate Institute, Regina.

Sessions of the Normal School, for the training of teachers for First, Second and Third Class certificates, were opened at Regina and Saskatoon on August 20th.

A two months' course of Physical Training for teachers opened at Virden, Manitoba, on July 16th. Twenty-one teachers from Saskatchewan made application for admission to this course.

Mr. L. H. Bennett, who has been in charge of the Manual Training work at Regina, recently resigned his position to enter the office of Mr. J. H. Puntin, Architect, Regina. Mr. Bennett will make a special study of school architecture.

Miss Ethel Alford, M.A., of Peterborough, Ontario, has been appointed to the staff of the Normal School in place of Miss Levinson, who recently resigned.

One of the principal attractions at the Brandon and Regina Exhibitions this year was the Regina Boy Scouts' Band, composed of lads from Regina Public and High Schools. This is probably the only organisation of the kind in Canada.

A convention of teachers engaged in work among the Ruthenian Schools of Saskatchewan was held at Rosthern, July 31st and August 1st. Addresses were given by A. H. Bull, M.A., Deputy Minister of Education; J. A. Snell, M.A., Principal of the Normal School, Saskatoon; A. W. Keith, B.A., Inspector of Schools, Rosthern; Joseph Greer, Principal of the Training School for Foreign-speaking students, Regina, and others.

NEW BRUNSWICK

R. P. Steeves, M.A., for many years Inspector of Schools in New Brunswick, recently resigned his inspectorship to accept the post of Director of Elementary Agriculture under the New Brunswick provincial government. The vacancy caused by Mr. Steeves' resignation of the office of inspector was filled by the appointment of Mr. Alfred J. Brooks, for some time Principal of the Kingston Consolidated School.

Mr. F. A. Good, for some years Science teacher in the Grammar School at Fredericton, N.B., resigned his position recently to accept the post of instructor in Nature Study at the Provincial Normal School, Fredericton, N.B.

Mr. Thaddee H. Hebert, B.A., of Dorchester, N.B., has been appointed to fill the vacancy on the Grammar School staff caused by the resignation of Mr. Good. He will enter upon his duties at the reopening of schools after the summer vacation.

The results of the Matriculation, High School Leaving, and Normal School Entrance Examinations, written at the various stations throughout New Brunswick in July, 1913, have been announced by the examiners. In the Matriculation examinations 173 candidates wrote, and in the High School Leaving there were 8 candidates. Of the candidates for Matriculation 168 took the full course for admission to the Arts course, and the remaining 5 took the examinations for the Engineering course. Of those taking the examinations in Arts, eleven passed in the first division, 65 in the second, 43 in the third, 27 in the third division conditionally, and 22 failed. Of the candidates for the High School Leaving, three passed in the second, three in the third, and three in the third division conditionally.

In the Normal School Entrance examinations there were 773 candidates, of whom 226 wrote for first, 495 for second, and 52 for third class. The results of the examinations were as follows:—84 passed for first, 311 for second, 196 for third class and 182 failed to pass for any class.

NOVA SCOTIA

The Rural Science Training School, Truro, N.S., held a very successful Summer Session. The enrolment was 105. The Summer School of Science for the Atlantic Provinces closed its three weeks' session in Halifax, July 29th. About 200 attended, and good work was done.

Miss Eleanor Robinson, of St. John, who succeeded the late Dr. Hay as editor of the *Educational Review*, spent a week at these two schools in the interests of the *Review*.

R. P. Steeves, Esq., Director of Rural Science Education in New Brunswick, spent two days in Truro while the Summer School was in session.

Mr. Leon Nichols is the new principal of West Highlands School, Amherst, N.S. This school, though only two years old, already has fifteen teachers.

Miss Ward and Miss Lavers are leaving Parrsboro schools to take positions in Amherst schools.

Berwick, Kings County, N.S., aroused much public interest last year through its school exhibition. Flowers and vegetables were grown on home plots, and prizes were awarded for the best. Samples of map-drawing, models and other hand work of the school also ranked high at this exhibition.

QUEBEC

Three short courses for teachers were held at Macdonald College during the month of July, and all with pronounced success. In the French Specialists' Course, with Mr. Robert in charge, there were 30 students; in the Art Specialists' in charge of Miss Goodenough, assistant supervisor of Art in New York City, there were 12 students; and in the Physical Culture course under Miss Cartwright of the Royal Victoria College, there were 11 students. Much congratulation is due to those who have conducted these courses with such general satisfaction and benefit.

To provide some training for those teachers of the province who otherwise would teach on permit only, a Summer School of about three weeks' duration was held this year at Lachute, Que. About 90 teachers intending to teach in rural elementary schools during the coming year took the course. Principal McBurney and Inspector Rothney conducted the course.

Miss Janet Greig, for four years teacher of French in the Practice School at Macdonald College, has resigned to take a position in Vancouver. Miss Greig's work as a teacher in Montreal, and later in the Practice School, is well and favourably known, and it is with much regret that her friends see her leave the province. She will be especially missed in the French Summer Schools, in which she has been a demonstration teacher for some years.

Dr. Sinclair, for four years and a half Head of the School for Teachers of Macdonald College, has resigned, and is succeeded by Professor S. Laird, recently of the Faculty of Education of Queen's University. Professor Laird will receive the earnest support of the teaching profession of the province.

BUSINESS NOTES

With this number THE SCHOOL begins its second year of publication. We have increased the size of our page over twenty per cent., and while there may be fewer pages, the amount of reading matter is considerably greater than last year.

The June number was mailed to 3,385 subscribers. We are hoping that these readers will do what they can to help THE SCHOOL to reach 6,000 subscribers this year.

THE SCHOOL is not a commercial venture; what it earns it gives back to its subscribers in a better journal. It is not a philosophic treatise; it carries a message from the school-room to the school-room.

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THE SCHOOL asks for *your* assistance. Give it your counsel as to its policy. Give it your subscription in support of its efficiency. It needs both and will strive to merit both.

THE SCHOOL is still answering inquiries regarding school-room decoration, and from time to time we shall try to give some of these answers through our columns.

We shall be glad if subscribers will notify us *promptly* of change of address.

Our readers will find it to their advantage to consult our advertising pages when considering purchases for school or personal use. A number of firms and individuals have begun advertising with us in this number for the first time. You will find all the advertisements interesting, and you will assist THE SCHOOL if you deal with its advertisers. They will give you the very best of service.

In "Hints for the Library" some of our contributors try to suggest the names of books which are useful for School Libraries. They give their opinion as to the values of these books. This Department should be found useful.

One day a teacher was having a first grade class in physiology. She asked them if they knew that there was a burning fire in the body all of the time. One little girl spoke up and said:

"Yes'm; when it is a cold day I can see the smoke."—*National Monthly.*

"I don't believe Johnny's teacher is quite right in her mind," said Mrs. Lapsling. "When he came home from school yesterday he told me he came across the word penultimate and asked her how to pronounce it, and she said he must place the accent on his Aunty Penultimate. Did you ever hear anything as crazy as that?"—*Chicago Tribune.*

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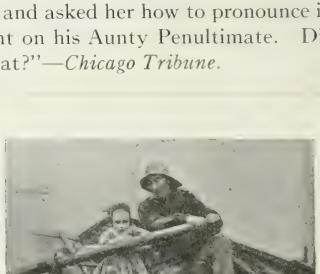

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Composition Day.

Eminent personages complained to me that already popular education in France was carried so far that society began to be dislocated by it; that the labourer would no longer stay in his field, nor the artisan in his workshop; that every labourer would be an artisan, every artisan a clerk. This is the language which we have all heard so often from those who think that the development of society can be arrested because a farmer's wife finds it hard to get a cookmaid. It is sufficient to say to those who hold it, that it is vain for them to expect that the lower classes will be kind enough to remain ignorant and unbettered merely for the sake of saving them inconvenience.

—Matthew Arnold, 1859.

The School

"Recti cultus pectora roborant"

Editorial Notes

Ourselves.– An Ontario public man who has a gift for seeing things as they are and describing things as he sees them expressed himself recently somewhat as follows: My work has brought me into close touch with all sorts and conditions of men. I know something of the men of most occupations. In personal worth and professional honour the schoolmaster ranks high—the highest, bar none.

It was good to hear this. All the better when it is remembered that in other respects the recognition of the teacher's worth is so tardy and so intangible. What schoolmaster has ever been selected as Senator or Commissioner or Special Agent or even Principal of a Public Institute for Defectives? When a recent Ontario statute recognized the schoolmaster's dominant interest in the administration of local libraries such a protest was raised as arrested all action. The teacher is still paid a salary which would make a professional cook blush. And when he attempts to take advantage of the better salaries of to-day after the manner of the members of other trades and professions, he is at once called unprofessional and his way barred by cast-iron contracts. A few months ago the High School Board of an Eastern Ontario town declared all its High School posts vacant and called for applications—at the whim of an influential member who probably thought to do things "on the cheap". The protest of the citizens and the re-engagement of the old staff, an unusually excellent one by the way, would not wipe out all traces of the humiliation. Almost at the same time another High School Board in Ontario rewarded twenty years of faithful service on the part of its principal by advertising his post as vacant without even notifying him!

Uncertain and tardy recognition is not the whole story. Such recognition as is bestowed is not always discriminating. It is sometimes given where it should be withheld. The true teacher is overlooked and the nondescript called into the limelight. When an unfortunate being, who more than a generation ago taught for a few months without legal qualifications, appears as a vagrant, he is announced with disagreeable insistence as a "notable scholar" and "brilliant educator"! When a

man who has never held a teacher's certificate and never attended a training school criticises the training schools as a teacher his sayings are quoted as oracular! Not infrequently the teaching staff of Ontario has been forced to stand silently by while the opinions of a man who has failed signally in the school room are quoted as the last word on problems of curriculum and discipline.

And so because the recognition vouchsafed the teacher is tardy, intangible and sometimes undiscriminating, it is very good to hear the true words of the Ontario public man!

Holidaying.—Fashions change even in holidaying. They change for teachers as well as laymen. A few years ago most Canadian teachers gave their Summer vacation to the sports of their native town or to work on the farm or at the office desk. It is a new fashion which gives the Summer to study at educational centres in Canada or the United States. It is another new fashion which gives the vacation to trips by land or sea. Many Canadian teachers go South and West in the United States. More go Westwards into the new Canadian Provinces. Not a few spend the summer in historic spots in old Quebec or by the sea. Two prominent and altogether profitable developments of this fashion are the trip to Europe and the summer camp in Canada.

Manitoba and the West send annually a very large party of teachers across the Atlantic. Two large parties left Toronto for Europe in July last. Atlantic Steamships and railroad agencies now make special efforts to interest teachers and tourist agencies offer special arrangements. "No dining table on the liners out of Montreal is without a teacher or two in July", says a Commercial man who knows the Atlantic traffic. For the last three summers the Canadian Press has followed with cablegrams the doings of Canadian teachers in the British Isles.

Probably no class of men is so well represented in the summer camp or the summer resort as the teacher. He is found everywhere—in the National Parks, on the St. Lawrence, Rideau, or Trent, and among the rivers, lakes, and islands of the Georgian Bay district. His vacation comes at the height of the camping season. His activities throughout the winter and spring months are so exacting, and so exhausting to his nervous system, that no form of relaxation is quite so attractive to him as camp life. And to no man or to no occupation probably does camp life bring such generous gifts. In touch with the life of the woods and water his nerves rest, his body grows strong, and unconsciously he replenishes that store of fact and incident upon which the modern school never fails to draw daily. The teacher's growing fondness for camp life, and the growing fondness of Canadians in general, makes doubly wise the action of those public men of Canada who set apart National Parks as national

play grounds for all time. Ontario has done a part of her duty in this regard. She must do more. Muskoka, Parry Sound, the Georgian Bay district in general, will become one of the great camping grounds of this continent. It cannot be an agricultural district. It is doubtful whether it will ever again be a lumbering district. But it can be made as it is now to a large extent, the Summer resort of America. More land should be reserved for the public. The government should begin now and reserve certain islands and certain foreshores for all time for the camper.

The Supply of Teachers.—The supply of teachers on this continent has been short for ten years. The causes are varied—economic, social, and professional. Great prosperity in the commercial world draws men from the school room. Women who a few years ago found in teaching almost the only occupation which utilised their higher intellectual powers now find many such—the professions, the office, the library, the hospital, journalism. The growth of the teacher-training system makes it increasingly unprofitable to use teaching as a stepping-stone to some other occupation. He who now pays the price in time and money to become a teacher remains a teacher—and many refuse to pay the price. Transients whose numbers were legion in the past are fast disappearing from the teaching profession. It must be acknowledged that overwork or overpressure has forced many men and women out of teaching. The American school world has been exposed for the last ten years to the "driving" power of expanding courses of study, of centralising administrations, and of exacting public interest. It must not be forgotten, moreover, that increase in population and in new types of schools such as Kindergartens, Manual Training centres, technical institutes has accentuated the scarcity of teachers.

Ontario has been exposed to all these influences. She has been prosperous beyond the lot of most States on this continent. She has been forced to meet the unusually urgent demand for teachers for the West. She has gone further than any state on this continent in organising a teacher-training system which places an expert in every school room and protects the public from the incompetent.

There is evidence that the crisis in the supply of teachers is now past. The demand from the west begins to slacken. The increased attendance at the Faculties of Education is evidence of a movement from the commercial world back to teaching. The High and Continuation School posts have been filled and there is a surplus supply of teachers especially in the languages. All urban schools now have fully trained teachers and the requests of the Inspectors for temporary certificates have been reduced to a few poor remote sections. Ontario will probably hear little more about the scarcity of teachers.

Imperial Conference of Teachers.—The League of Empire and the Daughters of the Empire do much to develop throughout the Empire the idea of a common citizenship. Their agencies are conferences and publications, competitions for prizes and many benefactions in hospitals, schools, public buildings and parks.

The League of Empire does its work in Canada mainly through the schools. With the aid of the teacher, and without interference in his responsibilities, it attempts to develop through conferences, publications, essays and prizes, knowledge of the Empire, interest in its co-members and pride in its ideals.

In midsummer 1912, the League called at London a conference of teachers from all parts of the Empire. The meetings were large and the discussions quite practical. The Hon. I. B. Lucas, now Treasurer of the Province, Dr. J. L. Hughes and Mr. F. C. Colbeck were the Ontario representatives who took part in the proceedings. Mr. Lucas was so impressed with the significance of the Conference that he at once volunteered to secure Ontario's invitation for a Conference at Toronto. The Hon. Dr. Pyne, Minister of Education for Ontario, returned in August last from London where he extended to the League officials his own invitation and the invitation of the Province of Ontario for the next Imperial Conference of teachers at Toronto.

It is unnecessary yet to refer to the purpose of this conference. To give to the teachers and thus to work into the life of the Empire the idea of a common imperial citizenship is no mean purpose. But reference might be made to two phases of the discussions at each recurring Conference.

Consciously or unconsciously the representatives regard the Conferences as agencies to promote uniformity in schools. Now, uniformity is impossible. Different social, economic, and political conditions require different schools. So soon as schools lose contact with their environment they fail and the intellectual life fails with them. Not uniformity but variety in uniformity should be the ideal of the Conferences.

Many teachers now enter Canada annually from the British Isles. They come with or without certificates, with or without definite professional training, and they ask for full recognition in Canada, because, forsooth, they have been teachers in the Old Land. This idea of the free interchange of teachers and certificates may strike the imagination of the Imperialist, but it also is impossible. Canada, and in particular, Ontario, has gone far in the matter of teacher-training, no British state farther, or as far. If all British states will rise to her level, well and good. She cannot recede, and so, in all fairness, she cannot impose upon her own sons and daughters burdens from which she exempts the sons and daugh-

ters of England, Scotland, and Ireland. Of course this does not preclude agreements under which Ontario will accept other courses of training and certificates as equivalents in part or whole of her own. This she does freely now. But it must preclude all possibility of retrogression in teacher-training in Ontario and all possibility of penalising the Ontario teacher in favour of his British cousin. As to the Conference however,—every Canadian teacher heartily endorses Dr. Pyne's invitation.

The D. E. A.—The Dominion Educational Association met at Ottawa late in August.

This association has not had a happy existence. Like the American Association (N. E. A.) its earlier record was one of infrequent meetings and sparse attendance. Distances in Canada are great and the population thin. So long as the Provincial and county associations of Canada thrive, and in thriving monopolise the holidays and the surplus money usually set apart for Conferences, it is probable that the Dominion association will not bulk large in attendance or influence.

The meeting of August was not an exception to this rule. The discussions were frank and very fruitful, but the public was not interested and the teachers did not attend. It is probable that conditions peculiar to the meeting of this year emphasised the unsatisfactory result. The date of meeting, late in August, did not swell its numbers. The delayed announcement of the meeting, the very inadequate advertising, and the unusually abrupt and curtailed character of the programme were also factors in determining the fate of the meeting. At best the teachers of Canada will attend in small numbers. To retain even small numbers it is necessary that the officers surround the meeting with the most favourable conditions.

A little boy was asked how he stood in school. "In the corner," he replied. . . . Once upon a time a little girl was asked to define a mountain range. She said it was a large sized cook stove. . . . A school teacher asked her class who was the mother of the great Scottish leader, Robert Bruce. "Mrs. Bruce," said one little boy. . . A little girl went out on her back porch one morning and found that a chunk of ice left by the iceman was nearly all melted. "The ice is about all drowned," she told her mother. . . . A teacher asked a little girl: "What is the office of the gastric juice?" "The stomach," she said.

"Willie, why couldn't you find the result of these examples you took home?" inquired the teacher, in a sharp voice. "Please, ma'am," replied the shaking boy, "me farther says they wuz too hard for him, an' would you mind giving me a few easier ones to do?"—*Woman's Home Companion.*

The American High School

H. T. J. COLEMAN, B.A., PH.D.
Dean, Faculty of Education, Queen's University

THE term, "American High School", must not be construed to imply a rigidly uniform system of secondary education. Uniformity in educational practice is the one thing which our American cousins seem to have escaped, or, at least, to have avoided. There is a wide difference for example between the high schools of New York and those of California and within the borders of the same state there is frequently a wide difference between the high schools of one locality and those of another. This is the case not only as regards the character of the teaching and the qualifications of the teachers but also as regards the organisation and the contents of the course of study. However, there are certain characteristics which, prevailing as they do over a wide area, may, in rather a loose sense, be taken as typical. It is with these characteristics that this article deals.

The Canadian who lives for any length of time in the United States is struck by the fact that the average American community is tremendously interested in the high school as an institution. The writer has attended high school commencement exercises at which an admission fee was charged in order to keep the attendance reasonably within the limits of the largest auditorium available—a theatre easily accommodating two thousand people. Summaries of all the commencement orations were published in the daily press with an occasional editorial upon one or more of the topics selected by the youthful orators or upon the work of the half year just completed. This general interest and support makes it possible for school boards to spend large sums of money upon buildings and equipment though unfortunately the same liberality is not always shown when teachers' salaries are under consideration. The difference between a fine, handsome, modern building and an ugly, old-fashioned one appears to the average citizen readily enough. He does not discriminate so readily between good teaching and poor teaching or between a sincere and competent (and therefore modest) educationalist and a loud-mouthed charlatan.

While there has been no supreme authority to control courses and time-tables, while each state and sometimes each community is a law unto itself, there is among all the American high schools of the better class an essential uniformity in these particulars. This has come partly as a result of experiment and discussion with the consequent survival of the

most suitable, and partly as a result of the imitation by newer and smaller schools of certain well-reputed schools and school systems. The consensus thus arrived at has taken in the main, the following forms:

1. The high school course is divided into four years, known frequently as the 9th, 10th, 11th and 12th grades of the public school course. Each of these grades has in the larger schools two subdivisions and so half-yearly promotions are the rule. The promotion from the elementary school to the high school (i.e. from the 8th to the 9th grade) is as little a matter of formal examination as the promotion from one grade to another.

2. The co-ordination of the two chief parts of the public school system is made the more easy by the quite general practice of placing both high and elementary schools under the same executive officer (known generally as the superintendent of schools). This practice is not without its embarrassments, so far as high school principals and teachers are concerned, since the average superintendent can scarcely be regarded as competent, either from the standpoint of scholarship or from the standpoint of experience, to supervise high school teaching. Not infrequently, it is to be feared, the degree of the superintendent's interference in high school matters is in inverse ratio to his competence to do so.

3. The ordinary high school course consists of from fourteen to sixteen units. A unit is a study taken four or five times a week throughout a year. The completion of the required number of units leads to the diploma of graduation and may and usually does, in the case of the better schools, entitle the student concerned to admission to the Freshman classes of certain colleges.

4. The average student rarely carries more than four or five studies abreast but as a compensation he has daily recitations in each of these subjects. When the prescribed amount of ground is covered the subject is dropped, sometimes to be resumed at a later date but oftener not. Such a subject as Latin is usually carried throughout the four years by those who elect it but such subjects as Physical Geography and Ancient History are not usually carried for more than a single year and sometimes even a half year is deemed sufficient.

5. The elective system has a strong hold upon the American High School. The student not only chooses a particular course from the five or six offered to him but within that course he chooses from a considerable variety of available subjects. English and History are as a rule however, common to all the courses and there are other subjects which form the basis (the back-bone, so to speak) of particular courses. Examples of these are Latin in the ordinary College preparatory course and Mathematics, Physics and Chemistry in courses qualifying for admission to higher technical institutions.

6. Because of the comparatively small number of subjects carried abreast, the student has considerable free time during the school day. This free time is generally spent in preparing his lessons for the following day. Moreover the comparatively simple organisation of the course of study and the length of the ordinary recitation (rarely less than three quarters of an hour) limit the daily work of the teacher to some six or seven recitations. For city high schools six lessons per day might, I fancy, be regarded as the maximum, and in fact I know of one large school in which teachers were by a regulation of the school board forbidden to exceed that number.

7. A very rigid distinction is made between high school studies and elementary school studies. Arithmetic very rarely appears on the high school curriculum; it is supposedly completed in the 8th grade—the final year of the elementary school. English Grammar is taught only incidentally as an aid to English Composition. Spelling also is taught only incidentally. Geography appears only in the specialised forms of Physical and Commercial Geography and these are either elective studies or belong to special courses so that there is rarely any compulsory study of these subjects.

8. The work prescribed in the classical and modern languages including English) is as a rule, quite extensive. It is quite the common thing for example to find the student of Latin covering in the four years of his high school course three or four books of Caesar, two or three orations of Cicero and five or six books of Vergil. Whether such is preferable to the much smaller amount prescribed for the ordinary Canadian High School student cannot of course be decided without settling first the vexed question of intensive versus extensive courses for adolescents.

9. There is, it would seem, a strong feeling of independence among the teachers of the American High Schools. They resent very much any attempt on the part of college authorities to dictate as to the nature or the extent of high school courses. An article in the recent report of the Carnegie Foundation characterises the condition of affairs as one of "border warfare". The tremendous growth of the American High School and the advancement of the status of its teachers has led to the quite general belief that the most important field of the high school lies quite apart from the small domain of its college affiliations, and hence it is felt that to allow college dictation at this late date would be a most exaggerated case of the tail wagging the dog. Good sense, on both sides is, however, providing a modus vivendi and it is to be hoped that before long a rational (and therefore, a permanent) settlement of the difficulty will be reached.

I should like in conclusion to set down certain personal impressions of the American high school student and of the American high school teacher.

The former has the virtues as well as the vices of his nationality. The not infrequent lack of proper home restraint tends to make him impatient of discipline and the feverish social life by which he is surrounded tends to give him the habits, the dress, the manners, and the ambitions of the man long before the judgment and the self-control proper to manhood have been reached. This same unfortunate social precocity is found, as might be supposed, in high school girls as well as in high school boys. The American youth in a Canadian private school who, apropos of some difficulty with his teacher, suggested that they talk over the matter as "man to man" is an illustration of that exaggerated democracy which seriously threatens the well-being of the American High School. However, the average American high school youth is most likable only (like all youth) he needs the strong and sympathetic control of the teacher whom he respects and for whom he has a personal affection. He abounds in initiative and any one who sees him in the class room realises that he is quite willing to take an active part in the recitation on any subject in which he is at all interested.

American High School teachers are of all grades of excellence, mediocrity and inefficiency. The influence of public criticism, the force of competition, and the growth of a professional spirit are, however, tending to eliminate the most palpably unfit. Many of them are still, however, of quite insufficient scholarship and most of them enter upon their work without adequate professional training. If any serious answer on the writer's part were needed to the contention that the University graduate is amply qualified to teach without any training of a professional sort, I might refer to a score or more of such untrained graduates who have come under my own personal notice in various American high schools, and whose pitiable ignorance of even the rudiments of the teaching art would convince the most sceptical layman that the B.A. degree is no guarantee of teaching efficiency. The most hopeful thing about the American high school teacher is his capacity and his desire for self-improvement as attested by the enormous enrolment in University summer courses and the rapid increase in the number of schools of Education attached to colleges and universities. In a country like the United States, where each state and each locality jealously guards its local liberties in educational matters reform can only come (as it is coming) from within, from the desire of the individual teacher to improve his own powers and standing and from the willingness of the individual school board and of the individual community to honour in all proper ways the competent worker.

The Problem of Spelling

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IN connection with the development of language in children there are four main problems. The first of these is concerned with the understanding of the vernacular when spoken. The second is concerned with the use of language orally. The third centres around reading—the understanding of written and printed symbols; while the fourth is concerned with the use of the vernacular in writing. Spelling is involved in the fourth problem. In order to write the mother tongue one must be able to spell the words of which it is composed.

Prior to the invention of printing, spelling was in a very fluid state. Each man spelled as suited his fancy best. But printing "fixed" it, and now, if alterations are to be made at all, they must be made consciously.

It is usual to speak of a man's vocabulary as if he had only one. In reality he has several more or less distinct vocabularies. There is the "speaking" vocabulary he understands, and there is the "reading" vocabulary he understands. There is the "speaking" vocabulary he uses and there is the "writing" vocabulary he uses. These four vocabularies develop at different times, are of different sizes and are never complete or perfect. The first to develop is the speaking vocabulary (understanding); the second is the speaking vocabulary (use); the third is the reading vocabulary; and the last is the writing vocabulary. The two speaking vocabularies are fairly highly developed as a rule before the child enters school, i.e., the child can talk and understand speech before he becomes a pupil. The development of the reading and writing vocabularies are usually problems for the school. Few children learn to read and write at home. These vocabularies are also of different sizes; we understand more words in speech and in reading than we can use in speech and in writing. Lastly no vocabulary is ever perfect or complete; it is always in the making and contains words perfectly well known, others known but fairly well, and some which are scarcely known at all and which will disappear if no opportunity for the exercise of them is afforded.

The writing vocabulary is peculiar in its development. It is here that imperfect knowledge shows itself most clearly, and generally in bad spelling. If, however, the compositions of children were restricted to words in their writing vocabulary which they know how to spell there would be no bad spelling. Every child would make 100 per cent. in

spelling. But the free composition of the lower classes carries the child into a region of words of which the meaning and use are perfectly well known, and of which the spelling is quite unknown. *The differential rate in the acquirement of the various vocabularies creates the problem of spelling.* The problem is most acute in the lower grades because the vocabulary of which the spelling is known is so much smaller than any of the other vocabularies. As the child progresses in years and knowledge the writing and spelling vocabularies tend to become one. But both invariably lag behind the understanding vocabularies of speech and reading.

If the preceding theses are correct, we should expect bad spelling to disappear with age. This is actually found to be the case. To prevent bad spelling in the lower grades, we can either restrict free written composition or can emphasise the spelling drill. The former plan is to be deprecated; the latter recommended, provided it is not carried to excess for, as we have seen, bad spelling usually eradicates itself in time.

The teaching of spelling, like all teaching, is at bottom a psychological problem. Spelling is a habit just as cycling and skating are habits. It is a sensori-motor habit acquired by repeated motor reactions to certain sensory stimuli. And, as in the learning of all habits, certain rules and maxims must be obeyed. We must make the results of good spelling pleasant and the results of bad spelling unpleasant. We must put together what we wish to have go together. We must reward good impulses. Conversely we must keep apart what we wish to have separate. We must let undesirable impulses bring discomfort. Writing up spelling mistakes on the blackboard, or reciting them aloud in order to get the correct form is wrong. We are putting together what we do not wish to have go together. A similar situation is seen when children are given words purposely mis-spelled and are told to give the correct forms. Always emphasise the right form; keep the wrong form ever in the background.

But a still more subtle psychological analysis can be made. In spelling we go from the meaning of the word to its actual articulation in letter sequence or its writing. This to a large extent is the reverse process of reading, where the passage is from the written or printed form to the meaning it conveys. When the habit of spelling has been acquired the process seems simply to be: (1) a recall by memory of the word which fits a felt meaning; (2) consent is now given to the writing of it; and (3) the writing takes place automatically. But there are many steps between (2) and (3) which have never yielded to introspective analysis. These steps depend in part upon the mental images which help the recall, in conventional order, of the symbols composing the word, and these vary in

different individuals. In some, visual images of the individual letters play an important part; in others, auditory images of the sounds of the letters composing the word, or motor images of the speech-movements involved in pronouncing the word, may be of greater significance. It is very probable that many forms of imagery are used by each of us. The importance of visual imagery has been greatly exaggerated. The person who spells by visual imagery will never need to write a word to see if it is spelled correctly.

The earlier psychology of spelling was certainly false. It assumed that spelling was a method of memory supported by certain rules and this led to a false pedagogy of the subject in which lists of isolated words from a spelling book played a conspicuous part. Memory has little to do with it. Business men who dictate all their letters to stenographers do not forget how to spell. The ability to perceive minute differences, which is largely innate but may be trained, is much the most important factor.

But the teacher will never go far wrong if the following advice is followed. Teach first the words in most frequent use. Give about five minutes' drill each day, but never give more than fifteen. Emphasise the correct forms. Aim at avoidance of error rather than correction of error. Practise various teaching methods; use oral repetition sparingly; and use writing, *especially copying*, most frequently. Lastly, don't expect perfection at the outset; mere increase of age will eradicate many of the spelling errors of children. Spelling, like manners of speech, is largely acquired without conscious effort.

A BRIEF PICTURE STUDY.

Our frontispiece, taken from a painting by Geoffrey, is suitable for picture study and as the basis of a school composition.

What are these children doing? Do you approve of the title, "Composition Day"? Why? Can you give the picture another title, such as "A Difficult Problem", or "Copying an Idea"? Why?

What does the artist tell you about the difference in character of these children? Give a character-name to each of the three.

What is the centre of interest? What change in the meaning of the picture would be made if the artist had exchanged the positions of the centre and right hand figures? Is the centre figure in an attitude for writing which could be described as correct? or natural?

What does the artist mean by putting into the picture only part of the left hand figure? Why is only the composition book to be seen?

What do the light and dark tones in the picture tell you about the strength and the position of the light?

Write an essay on "Composition Day". Illustrate your composition with an original drawing. S. W. P.

Suggestions for Field Botany

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BOTANY is a Science. Plant study is a better title for the kind of field work that appeals to nature lovers. Even plant study too often degenerates into nothing more than systematic botany.

In order to interest children in plants, teachers themselves should be enthusiasts. Enthusiasm is contagious. It matters little whether one studies flowers, ferns, trees, or vegetables. If a teacher can create in her students an inquiring curiosity, and teach them to investigate and to reflect on all they see, she has done well. She need not worry about the facts. Her students may have the pleasure of discovering them later.

With the lower grades, one can not do much more than have children observe flowers and leaves, noting differences in colour, shape, size, etc. In the higher grades, I should keep the ideas of function, evolution and adaptation uppermost.

For example, the strawberry furnishes texts for many interesting lessons. On examining its blossom, we learn something of its probable evolution. Comparison with simpler plants, such as the buttercup, may help us here.

In a wild strawberry, the calyx seems to be made up of ten sepals. Five, however, are smaller than the others. If it were suggested that sepals are specialised leaves, a bright student might reason that these small bracts between the sepals were stipules. Stipules, ordinarily, are attached to leaf bases. These bracts are attached to the bases of the sepals. Since the sepals are modified on account of doing special work, their stipules too, are modified. In fact, two have grown together to make one bract. Examine them.

Furthermore, the strawberry seeds are spirally arranged on the surface of the fruit. In watching the berry develop from the green centre of the flower, one can see that it is nothing else than the end of the flower stalk growing larger and larger. But a flower stalk is a branch that developed from a bud just as any other branch does. And on branches, leaves are arranged, nearly always, in a spiral. When the branch is small, the leaves are small and crowded. As growth goes on, however, the distance between them increases.

Notice the similarity of the strawberry. Since the berry is the end of a branch, and since the green carpels, which are much crowded in the blossom, become farther apart in the mature fruit, betraying their spiral

arrangement, is it possible that these carpels are specialised leaves? They do not look like leaves; but in position and development they follow the leaf plan. Compare the arrangement of seeds on a strawberry with that of "eyes" on a potato tuber. Note the crowding near the apex in each case. Note similar crowding of buds near the tip of any twig such as apple or willow.

For further help in our problem, examine carpels of other flowers. The empty pod of a pea is plainly a leaf. Notice its veining. Are the seed-cases of nearly all plants veined?

The fertile catkin of an alder betrays its leaf origin by frequently reverting to the leaf type. Any day in summer, one can find such a catkin with part of its scales grown about an inch long, narrow and reddish-green—a sickly attempt to be real leaves.

It seems a very good working hypothesis, then, that carpels are modified leaves. In the Strawberry, each small leaf encloses one seed. In the pea several seeds are in one leaf (pod).

In many plants, the seed vessel consists of more than one leaf. These leaves grow together in a variety of ways. This alone would furnish a source of much interest to our young investigators. Simple observations such as these will start someone to inquire into the probable evolution of parts of plants.

An idea of the evolution of species is best got by observing how plants change under cultivation, and, in a lesser degree, under varying conditions of nature. In other words, the study of adaptation to environment is probably the easiest part of botany, since illustrations are so numerous everywhere. Compare the same species of plant as it grows in good or poor soil; in shade or sunshine; in wet or dry ground; crowded or not crowded by other plants; near the seashore or inland.

The significance of observed variations in any one organ of the plant is not evident until we know the function of that organ. With that in mind, however, the plant appeals to us as an individual, working for its own good and that of its posterity.

Plant study of this kind is not distasteful to children. Systematic botany, on the other hand, will do more to make the average child dislike school than will almost any other subject.

This article will not help the teacher much by way of giving information. The motive is to suggest phases of the subject that will appeal to children. The teacher can get assistance from chapters on Ecology in any good botanical text-book. But first of all, study the plants themselves Become enthusiastic. Then watch for symptoms of the same enthusiasm in your students.

Reminiscences of an English Public School

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BEFORE beginning I would make two disavowals. In the first place this is not a description of an English School exactly as it is to-day, since it is not far off twenty years since I was there. While such schools are sometimes supposed to be ultra-conservative, I imagine that some important changes in their system have been introduced in recent years. Thus, I believe, much more provision is now made for the teaching of scientific subjects; how far at the cost of the time previously devoted to language study, I do not know. In the second place, it is not my purpose to institute comparisons between the English and Canadian systems, partly because my information on the former is not entirely up to date, partly because I am not sufficiently familiar with the latter from "inside" experience.

I use the title "Public School" as it is commonly used in England, since it is so well known that it is not likely to be confused with the "Public School" system of Canada. Of course, the English Public Schools correspond more closely to what we call here "Private Schools", the term "Private School" being applied there to what we would call a "Private Preparatory School". As, however, these Schools are so numerous and have such an important place in the English system of Secondary Education, some account of a typical one may be of interest even to those who are mainly interested in our High Schools and Collegiate Institutes.

The School of which I was a member from 1890 to 1895 is a comparatively recent foundation, but it was organised and managed more or less after the usual "Public School" tradition. It is situated in one of the most beautiful and healthful spots in the Midlands, a circumstance, among others, which accounts for its rapid rise in numbers (from 250 to over 400) during those years.

Practically all the boys were boarders, being distributed, roughly speaking, by fifties among eight houses. One's memories centre mostly round the House. The school-fellows, whose intimacy has been retained in after years, were usually fellow house-members. The strongest and most lasting influence came generally from one's House-Master, not only on the moral, but often also on the intellectual side, even though one may have never sat in his form. It was certainly so in my case. On paying a visit to the school, one always goes first to the old House. In athletics

the House was the unit of competition. In a matter of work, of course, this division was less apparent; but every boy who won a prize felt that he had worked not only for himself, but also for the honour of his House.

In the matter of discipline the House-Master took cognizance of one's behaviour not only in the House, but also in School. For "lines" could only be written on special paper which was in his keeping. The effect was salutary. In School a youth might not mind getting 100 lines from Mr. A, another 100 from Mr. B, and yet another from Mr. C. Each was ignorant of offences committed in other class-rooms. But it was another matter to go and ask the House-Master for paper for 300 lines from Messrs. A, B and C, all at once! He would ask the reason why, "*subigitgue fateri . . . commissa piacula*". I will not discuss here the value of the system of "line-giving". Some such form of minor penalty was almost indispensable. Incidentally as one was only allowed to "repeat" after giving 25 lines (and they had to be full Virgilian Hexameters, not Horatian Sapphics), I learnt by heart "*Sic fatur lacrimans*", *sqq.*

The main School-Building stood at the head of the slope down which the houses were ranged on either side. It was breathless work running up this hill, then up an outer and an inner stairway, and finally up what seemed a steep and dark ladder to the Sixth Form room at the top of the Central Form: all this in five minutes and at 7 a.m.!

In this building all the Class-work was done except "Preparation" which was done in the Houses. In the winter and spring terms the day's order was: Chapel 9.00; School till 12.30, except for a short break; afternoon School from 4.15 to 6.15, each "period" being an hour. Wednesday and Saturday were half-holidays. In the summer term (which lasted to the end of July), afternoon school was taken earlier. There were three half-holidays in the week, but every day there was early school for an hour before breakfast. Every evening 'Prep' was taken in the Houses for about an hour and a half. Upper-School boys were usually allowed to sit up for another half hour after Prayers. There were studies or "dens" in every house for all the boys, each holding two or three.

On Sundays there was a short Chapel service before breakfast, Morning Prayer at 11.00 and Evening Prayer with Sermon at 6.30. There was also one hour's school work in the English Bible or Greek Testament. During the other hours of this day we were free to roam over the hills or the open plain. In the morning straw-hats could be worn, but after dinner the regulation top-hat was required—"kennels" the amused rustics used to call them, as they followed jeering. On other days the boys, except Prefects and members of the Sixth, were not allowed to go out of the school grounds without a signed permission, and never into the town except between 12.30 and 1.00.

In the "curriculum" no attempt was made to make all the boys learn all the subjects. Except for the lowest forms, there were three main divisions: the Classical Side, the Modern Side, and the Army Class for candidates for Woolwich or Sandhurst. Of the two latter I cannot say much, as I was a Classical. Provision was made for special cases, each of the upper classes having a few boys "below the line", not as occupying an inferior position, but as doing special work and so not entering into the usual competition. The mathematical divisions "cut across" the usual arrangement of the classes, about one hour a day being assigned to them. For advanced pupils in mathematics, who were candidates for University Scholarships, there was a "mathematical Sixth", and they devoted most of their time to the one subject.

Apart from mathematics, the forms on the Classical Side were naturally divided according to proficiency in Latin and Greek, since about two thirds of the work was based on those subjects. There was very little formal instruction in English; the principles of grammar and composition were reached through Greek and Latin. A little English literature was read in class. Some might say there was not enough of it, but it was taken for granted that we would become sufficiently interested in the great authors to read them voluntarily. On the same principle not very much Modern History was formally taught. Usually these other subjects, such as Scripture, English and History, were taken by the same Master who took our Classical work. The result was that generally for a whole year most of our time was spent under the supervision of one man, often with the happiest results. Personally I find it difficult to state adequately the debt I owe to two of these masters in particular, both for their formal instruction and for the enthusiasm they imparted.

For French in the upper classes we went, each Classical form at a time, to a special master. He was a dear old fellow, an Austrian, I believe, by birth, who had, however, spent many years in France and England. Sometimes his classes were a bit hilarious, but we all loved him and really learnt a good deal from him. He was most interesting when talking, sometimes rather by way of digression, on the Napoleonic episode. I remember, when we were reading Erckmann-Chatrian's "Le Conscrit de 1813", he vividly described how the French troops ransacked his grandfather's wine-cellar. The better scholars of the class he used to call "The Old Guard".

German was, of course, a regular subject on the Modern side, but on the Classical side could only be taken as an "extra".

Just how the Science work was fitted into the scheme of things, I cannot remember, which means that many, if not most, of us took none at all, and I think it was rather regarded as a "side-subject". But probably

they have "changed all that" by now, as the laboratory accommodation and equipment have been greatly improved since 1895.

In all the forms, except the Sixth, the boys "took places". Each boy was given ten marks, and added two for every place he went up, and deducted two for every place he went down, the returns at the end of the hour being checked by comparing the total with the number of boys multiplied by ten. Sometimes a boy would go up a large number of places at a time, and I remember one instance of "dogged does it". It was a Roman History lesson on the time of Sulla, and none of us knew much about it, so that numerous questions passed round the whole form unanswered. One boy near the bottom firmly answered "*Sulpicius*" to every question, and finally his patience was rewarded. It *was* Sulpicius, and up he went the whole length of the form! The final standing was determined by a combination of "term-work", including compositions and examinations. Generally only five or six boys, out of a class of about twenty, were promoted at one time. If this meant that a weak scholar might stay on term after term and year after year in the same form, gradually losing interest and enthusiasm, yet one may ask whether he would be any better off in a higher class, acting as a drag on the rest of the form In some schools the practice of "superannuation" soon solves that difficulty. Each week unsatisfactory cases were reported to the Head-Master, and the offender was "put on *Satis*". That is, after another week he took to the Head-Master a special report from each teacher. If the report showed anywhere the words "*Vix satis*" or "*Non-satis*," he was either again put on probation or otherwise "dealt with". Perhaps the average boy was not an enthusiastic learner, less so than many of our High School pupils. The hard-worker was sometimes subjected to such contumelious epithets as "sweat" or "groiser". I remember being vigorously assaulted by a senior whom I had beaten in class, not, I think, because he was a disappointed rival for scholastic honours, but because he considered I was forcing up the standard in an improper way and not playing the game fairly. Sometimes no doubt this is simply affectation and "inverted hypocrisy", some boys being really more interested in learning than they care to admit. But there was not much chance of prolonged shirking. The standard was thorough; and it was not difficult to convince of sin those who broke such things as rules of concord or even of gender. The use of "cribs" was of course forbidden, but sometimes surreptitiously followed. The penalties, however, were severe. But on one occasion the authorities were merciful. The Head-Master called all the school together and said that he had reason to believe that cribs were being used by some, and appealed to all offenders to give them up voluntarily. They did so without exception.

In the Sixth form there was no "Place-taking" in ordinary class work, the final standing being determined by Compositions and Examinations. We had a "Critical paper" every week, with occasional essays, also four "Comps", Latin and Greek Prose and Verse. A great deal has been said against the educational value of Latin and Greek Verse writing. Certainly if something must be sacrificed to meet the demands of other subjects, it seems to be the first thing to go. But I do not consider that the time spent on this work was ill-spent. True, one might handle the hexameter and iambic in a purely mechanical way, and also acquire a tendency to try and scan English poetry in the same manner with unhappy effects; but in the main the exercise helped one to appreciate poetry both Classical and Modern. Specially good versions of Prose or Verse were inscribed in a white album, and sometimes a number of such "copies" done by members of the Sixth won a half holiday for the whole school. There were also special prizes for Latin and Greek Prose and Verse, an English Essay, and an English poem. One curious rule in this connection I could never understand. Every boy in the upper forms was compelled to compete for one or more of these prizes. The result was that the examiners had to wade through a whole mass of poor stuff, if not absolute nonsense, written by those who did not regard themselves as serious competitors. Legend had it that once, when the subject for a poem was "Carthage", a candidate took the Classical dictionary, marked off the syllables and copied out the article. Another, who bore a name honoured in the annals of the English Episcopate, produced the following:

"And they grew in prosperity
With the utmost celerity."

Again—

"And Regulus the city took,
And this is noted in a book."

The system of discipline was reinforced by prefects, some of whom had authority only in their particular homes, others over the whole school. Corporal punishment could be administered by prefects, but only with the permission of the House-Master on each occasion. Occasionally their privileges were abused, and sometimes the relations between prefects and "inferiors" were strained, especially when some champion of the latter was promoted into the ranks of the enemy, and seemed to go back on all his former principles! But these instances were not frequent, and the system was justified both in the administration of school discipline, and in the training in responsibility which it afforded to the senior boys. "Fagging" by prefects, and them only, was allowed, subject to very definite restrictions.

Of the athletic side of the school life I do not propose to say much. It was a school with a very high reputation for good cricket and football (association). These games were compulsory on practically all. The penalties for "Skipping Clubs" were almost as severe as for shirking work. I cannot help feeling that games figured too largely in the minds of masters and boys alike. Being no athlete myself, I confess I may be prejudiced in the matter. But the boy who was not proficient in games was rather "out of it". And it might have been better if he had been allowed to follow his own bent more freely, for example, by exploring the countryside or visiting the many places of historic interest in the neighbourhood, provided of course that he did *something*. Tennis was allowed, but scorned. Tobogganing and skating were rarely possible, but much enjoyed if the snow and frost did ever come to stay. There was a cadet corps, to which, I believe, now nearly the whole school belongs; and their record in rifle-shooting has been creditable. Such is the account of a school, the memories of which seem to grow more vivid as the years go by. It is necessarily an incomplete record, partly for want of space, partly because the writer's experience there was limited. Thus nothing has been said of the arrangement of studies in the more elementary classes, because I entered the school at a higher grade.

The readers of this journal may enquire, "How far does this system fit a boy for life in a country like Canada?" For the Universities and the professions in England, for settlement in a country like British East Africa, certainly for the Indian Civil Service and the Army, it provides an excellent training. For the immigrant to Canada it may bring certain initial disadvantages. These schools are still largely the preserve of one class in England, and they tend to foster the prejudices along with the better traditions of that class. Mr. John Galsworthy, indeed, actually lays the blame upon them for the present "labour unrest" and class feeling in England. Whether there is any justice in this charge, one can hardly say after many years' absence from the country.

A recent comer from such a school tells me that he considers that this criticism is less applicable now than a few years ago. A number of schools are growing up, which are organised on the same principles as the older institutions, but are less expensive and consequently "throw a wider net". Many a Public School boy brings with him to Canada ideas, prejudices if you will, and characteristics which make it hard for him to understand and be understood *at first*, especially if he comes to the Eastern towns or parts of the country that are "old" enough to have formed their own conventions and prejudices. He does not always readily adapt himself to new surroundings or undertake uncongenial

work, even if it is only to make a start. He sometimes has had an undeserved bad name because of the "remittance" man of his class, whom selfish parents have sent out to the "colonies", to be rid of him. On the other hand in "newer" districts, where conventions are less fixed, where there is plenty of out-of-door activity, in "pioneering" and in many branches of farming he generally does well enough. And in the long run, his training should stand him in good stead everywhere. If he has any good stuff in him at all, the spirit of discipline, the habit of thoroughness both in thought and action, the "sporting" tradition and the consciousness that "manners make the man" which he should have imbibed in his school life, all will help him to "make good" as a valuable recruit to our population.

A schoolmaster is telling a rather funny story against himself. He begins the story with the significant remark that one Saturday he paid the last of a series of visits to his dentist. On the following Monday morning one or two of his pupils looked at him curiously, but, of course, nothing was said. He makes a point of trying to interest his pupils in the current affairs of the world, so when his class assembled he opened his newspaper and, as usual, asked the question:

"Well, children, what is the chief event that has happened since Friday?"

Quick as lightning came the reply from a little girl in the front row:

"Please, sir, you've had a set of false teeth!"—*Green Bay Gazette.*

The class in English history was in session and the professor was telling of the impressionable age at the time of the Elizabethan era. After speaking for some time on the subject, he turned to one of the young men and asked:

"How old was Elizabeth, Mr. Holmes?"

The young man wore a far-away expression.

"Eighteen on her last birthday, sir," came the reply.—*Lippincott's Magazine.*

TEACHER—Do you know, Tommy, when shingles first came into use?

TOMMY—I think when I was between 5 and 6 years, ma'am.

A teacher had as a topic for composition, "Baseball". She told the pupils to write a composition on the last baseball game they had seen.

Johnnie wrote:

"Rain—No game."—*Chicago Journal.*

Scraps from a County Inspector's Note-Book.

The unsuccessful teacher often works harder than the successful teacher.

The failures of teachers are often due to mistakes of the head, rather than the heart.

No teacher can listen to one grade recite, and at the same time work out a problem in arithmetic for another grade. Such a thing is never attempted by the indolent, but by the industrious teacher. In attempting to do two things, she fails to do either one.

Some teachers put everything into their work except system. The ungraded, miscellaneous school is a small world. Like some great business corporation, it has its various interests, departments, and division of labour. Success lies along the path of least friction. The various interests must not clash but work together harmoniously. System is the solution of most difficulties. By system I do not mean the mere adoption of a hard-and-fast time-table or the laying down of iron-clad rules, but the carrying out of a well formed plan, and the application of intelligence to energy.

A short time ago I was watching an honest, industrious—too industrious— teacher conduct a reading lesson. She had two grades of twenty pupils each. While the advanced grade was reading the lower grade was supposed to be drawing. The work of the drawing class had been explained, and the teacher had begun the reading lesson.

The first pupil of the advanced grade had read but a few lines, when I observed that three members of the drawing class were holding up their hands for the teacher. Without stopping the pupil who was reading she walked towards one of the pupils whose hand was raised and asked, "What is it?"

"Please may I get my eraser from Karl?"

"You may", replied the teacher. The boy arose, walked down the aisle and a whispered conversation ensued between him and Karl. It became necessary for the teacher to interfere, and it was discovered that Karl did not have the eraser. All this time the reading continued. Much of it was inaudible to me, and I am sure the teacher heard very little of it, while the other pupils both of the drawing and reading classes were more interested in the "eraser" than in their own work.

Having attended to the other applicants for aid, the teacher returned to the reading class, and calling on the same boy asked him to read the opening paragraph over again.

Despite the fact that his second attempt was not interrupted, he read without life or interest. The reason was evident.

During the course of the reading lesson interruptions by the drawing class were frequent. The teacher was working hard and doing her best to keep every one else at work; but what a waste of time and energy!

Most of her work with the drawing class was unnecessary. Not only that, but it was harmful, rather than helpful, to the pupils. In some cases the teacher was asked to decide points that the pupil should have decided for himself. In every case the teacher was *telling*, not *teaching*. It is unnecessary to say the reading class was a failure.

This is not an isolated case. In many schools of two grades or more the same conditions prevail. The teacher is a slave to the pupils, not only doing unnecessary work but producing poor results.

The "Please may I . . . ?" of the pupils has become a habit, and a difficult one to break. The self-reliance of the pupils is being destroyed by the teacher's mistaken idea of her duty.

This drawing class should have been put at work before the reading lesson was begun. The teacher should have seen that all necessary instructions was given, and that each pupil was prepared to carry on the work. They should then have been told that they were not to interrupt the reading class, except in a case of absolute necessity.

If such a case arose, the teacher should have stopped the reader, and brought the work of the entire school to a standstill. The enormity of stopping the work of the school for any other reason than that of absolute necessity would be impressed on the pupils.

BLUENOSE.

A teacher in one of the schools defined conscience as "something within you that tells you when you have done wrong."

"Oh, yes," said a little lad at the end of the room. "I had it once last summer after I'd eaten green apples, but they had to send for a doctor."—*Ex.*

The children were studying a lesson in natural history, and the teacher asked for an example of the order of Edentata—that is, animals without teeth.

"I know of one," shouted Tommy, all eagerness.

"Well, what is it?"

"Grandpa!" shouted Tommy again.

Little Journeys to Rural Schools

F. H. SPINNEY
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II.

THE efficient rural school of the future must be the consolidated school. It is only a genius who, in a school of thirteen pupils, can keep up enthusiasm from September to July. And without enthusiasm, education is a cold, dead, useless process.

The children would be far better out in the fields—gathering flowers, building camps and making "mud pies", than to be under the instruction of a teacher whose spirit has been warped by loneliness, lack of inspiring associations, and cold indifference on the part of parents and trustees.

Not only does the teacher require daily association with other members of the profession, but the children require the stimulus, inspiration and social training that comes from contact with larger groups.

Holding this opinion, it was with pleasurable anticipation that I started out on Monday morning to visit a consolidated school. I further enjoyed the very unique pleasure of riding a distance of three miles in the "Van", in company with sixteen very merry boys and girls.

One boy possessed a natural gift of humour, and kept the others in a continual roar of laughter—all except two little girls who were "giving out" spelling to each other.

"Fanny thinks her room will win the spelling match again to-day; but that is where you are mistaken, Fanny. I can spell every word in the list with my hands tied behind me."

"You think you are very smart", said Fanny, with a toss of her pretty head.

I have always found this friendly bantering among children delightfully entertaining. The boy who was sitting next to me explained that every Monday the two senior classes have a Spelling Match, the words for which are chosen from a specified list. Pupils from other rooms, with the best conduct records for the previous week, were admitted as visitors. It was for this match that the little girls were making such careful preparation.

When we drove into the yard, the Principal of the school was "umpiring" a game of ball. There were only six players on a side; but the complement was made up on our arrival. I watched the game with much interest, and thought to myself that every boy requires the training in quickness of movement, alertness of mind and splendid self-control that is involved in the playing of a good game of ball.

The bell sounded at 5 minutes to 9, and by 9 sharp the classes were all hard at work. I was told that in the winter the school did not begin until 9.30.

I chose to visit a primary class. As the Principal conducted me to the room, he promised that I would see "some good teaching". His promise was certainly fulfilled.

On the table in front of the room were a number of objects, such as: four rosy apples, a basket, a plate, a knife, all of which were used in connection with the lesson.

Frank and Philip were called up to the front. Mary was asked to tell a "story" about Frank and Philip.

"Frank and Philip walked over to the table."

The teacher wrote that story very plainly on the front board.

"Bessie will tell the next story", said the teacher.

"Frank holds an apple in his hand."

George was asked to tell the next story.

"Frank cut the apple with a knife."

These stories were all written on the board, and several more—each being read by two or three pupils as soon as it was written. These are some of the stories:

Frank and Philip walked over to the table.
Frank holds an apple in his hand.
Frank cut the apple with a knife.
Philip put the two pieces of the apple on a plate.

Philip passed the plate to the teacher.
The teacher said, "No, thank you, Philip".
Frank passed the plate to Tom.
Tom ate a piece of the apple.
Frank and Philip walked back to their seats.

All the sentences were reviewed. The interest of the class was keen; for they were reading stories of their own composition, and the "content" of the reading matter was a living picture, fresh in their minds. "Expression" took good care of itself.

I have enjoyed the privilege of observing a number of good reading lessons, in both graded and miscellaneous schools; but that reading lesson impressed me as being the *best* that I ever saw. That is, the children seemed to derive the greatest benefit from the time expended on the lesson. The children recognized the largest words even more readily than the smallest. The teacher apparently put forth no special effort to hold the "attention" of the class. Her good efforts had been given to the preparation of the lesson; that is the surest way of holding attention.

There is no "best method" of teaching any subject. Nor should teachers confine themselves to any one method, no matter how good it may be. Growth is a process of change—casting off the old and taking on the new; and that is just what teachers should ever be doing, if they would find the greatest success and the greatest enjoyment in their work.

On leaving the school that day, I assured the Principal that his promise of a period of "good teaching" had been more than fulfilled. In saying this, I suggested that he need not consider my remarks "confidential". I like to confer my praise indirectly, when I feel quite positive that it will be passed along in the proper spirit.

As I walked across the fields to the home of a farmer friend, who had invited me to dinner, I thought to myself that no such efficient lesson would be possible in a one-roomed rural school. Then I further mused that it is the mission of every teacher to take advantage of every favourable opportunity to point out the innumerable features in favour of the consolidated school. I have mentioned but a few of such features, but careful thought will suggest many more.

The teacher asked, "When did Moses live?"

After the silence had become painful she ordered: "Open your Old Testaments. What does it say there?"

A boy answered, "Moses, 4000 B.C."

"Now," said the teacher, "why didn't you know when Moses lived?"

"Well," replied the boy. I thought 4000 B.C. was his telephone number."—*Pearson's Weekly.*

Combined Physical and Chemical Laboratory

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THE laboratory furniture of the school in which all the experimental science work is done in the class room has been described in the September number of THE SCHOOL, and such an arrangement should obtain only under exceptional circumstances. The more usual conditions in the moderate-sized secondary school will be those in which one room is set aside exclusively to be used as a laboratory, and usually there will be one or two smaller rooms that go with it to be used as the science teacher thinks best. The better class of continuation schools and the smaller High Schools should all have such accommodation as has just been mentioned. The larger High Schools and Collegiate Institutes will have at least two rooms, one for a physical and the other for a chemical laboratory and of course the larger schools will have still more elaborate equipment. It is the combined physical and chemical laboratory that will be described in this article.

Such a laboratory offers certain advantages over the separate rooms and of course still greater advantages over the conditions where the science tables are in the regular class room. The disturbance due to the class room and laboratory being combined disappears. There can be no economy in apparatus in such a room. Much apparatus is used in both physics and chemistry such as Bunsens or spirit lamps, retort-stands, beakers, etc., and in the combined laboratory the same pieces will serve for both, while in the school with separate laboratories either duplicate sets have to be on hand or a good deal of time is consumed in bringing the apparatus from room to room and much irritating confusion arises from the fact that they are not always put back in the right table cupboard. Such a laboratory takes up less room than the double science rooms and is certainly less expensive to equip and also to keep up. These are considerations of importance.

On the other hand such an arrangement has serious disadvantages that more than counterbalance the good points already mentioned. Unless the school is small or the matter of expense is serious the combined laboratory is not to be recommended. The students' benches suitable for physics are not convenient for chemistry. In a chemistry desk every student must have ready access to a sink while in physics the opening of the sink is inconvenient as a plain level surface of large area is required.

Individual desks of small size are best for chemical work, while in physics longer desks on which long pieces of apparatus can be placed are a necessity; a stone top is most resistant to the reagents of the chemical laboratories though quite unsuited to the work in physics where objects have to be clamped to the desk; the chemical desks require the space underneath to be taken up with students' lockers while in the physics tables it is

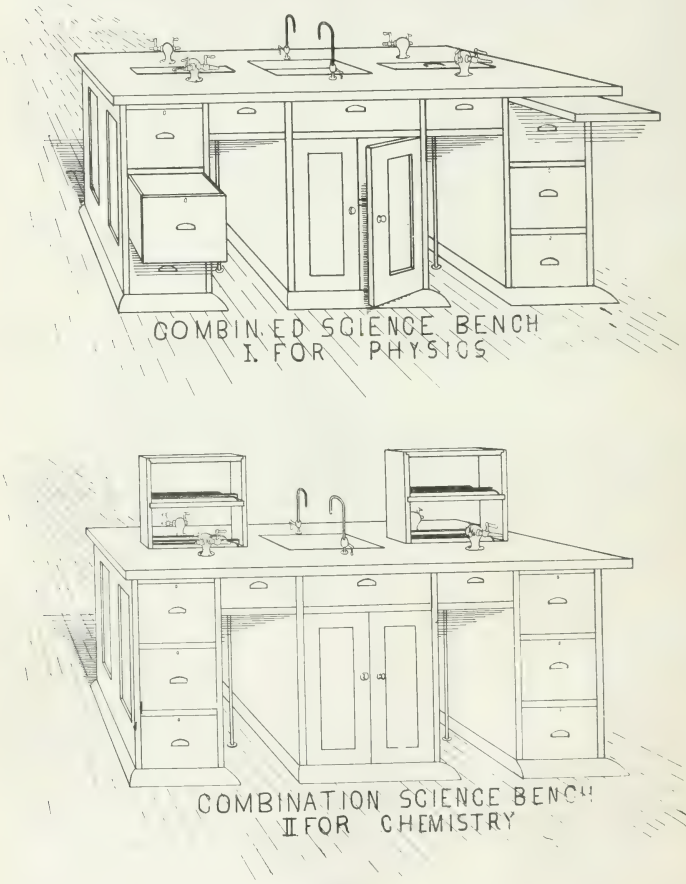
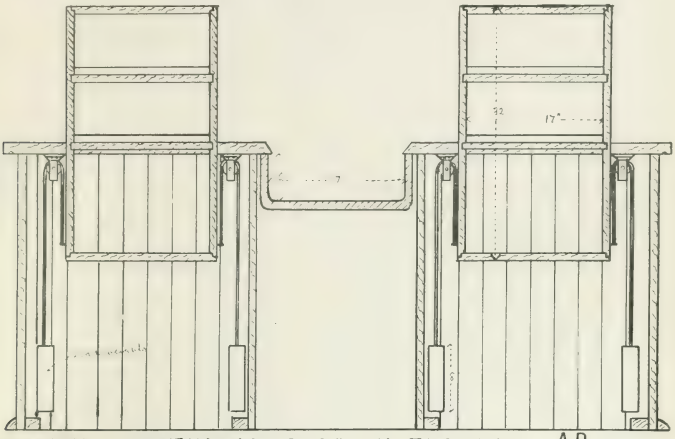


Figure 1.

better to have much open space below. It is frequently necessary to have more than one science class at the same time in a moderate-sized school and in the one-laboratory school some of these classes must be held in



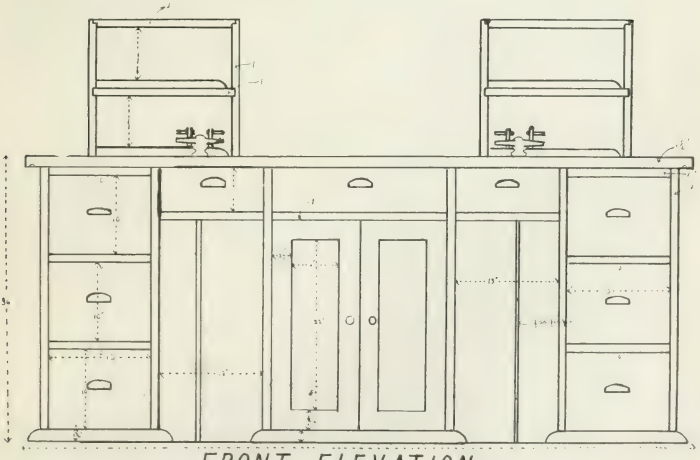


Figure 2.

ordinary class rooms and in this way experimental work is liable to be neglected. In the one-laboratory school facilities for carrying off the corrosive gases are not likely to be very efficient, and these are bound to be very injurious to the delicate physical apparatus and be the means of considerable depreciation in the value of the equipment.

The following arrangement and structure of desks endeavours to reduce these disadvantages to a minimum. Drawings of the combined desk used for physics and for chemistry are shown in figure 1. Figures 2, 3 and 4 show working drawings of the desk which if studied carefully will make its structure clear. Such desks are not in use in this country at present but are very largely used in Britain. They are probably the most efficient desk for their purpose yet devised. W. and J. George of Hatton Hall, London, were, I believe, the first to place them on the market. The desk about to be described is modelled after theirs though with some modification to make it more suitable for Ontario Schools.

Each desk has dimensions on top of 7 feet in length and 4 feet in width and will accommodate four pupils. This gives each $3\frac{1}{2}$ feet in length of table-top and a depth of 2 feet or where two work together, as is necessary in some experiments, the group has a table top seven feet long which is ample for any experiment in physics. The height is made suitable for students standing at work and is 3 feet, an inch or even two lower would be almost as convenient. The desk should be of such a height that the student when standing should be able to work with the forearm approximately horizontal.

The top should be made preferably of teak as no other wood can compare with this for such a purpose. It is tough, does not warp and being filled with resin is quite impermeable. If its expense is prohibitive, maple strips one inch wide thoroughly glued together with a waterproof glue (page 14, September issue) will answer well; but this may be expected to warp some and also to separate more or less where glued together. Georgia or pitch pine is quite suitable for this purpose as it is much harder than white pine and its resinous character is of advantage in this respect. The newest feature of this table from a Canadian standpoint is the reagent shelves. These are each 17 inches long, 8 inches wide and 18 inches high and each consists of two shelves. Each has a strip running lengthwise along the middle to divide it into two sides, one for a student on each side of the desk. To prevent the bottles falling out a low strip runs along the front of the shelf forming a low apron. This does not run quite to one end, the place where it is absent facilitating cleaning dust from the shelf. Each is 8 inches high which will allow it to take ordinary 8 oz. reagent bottles. Five or six bottles can be carried on each shelf. These have the end pieces projecting almost as far below the desk

as they rise above it. To give strength a cross-piece is put between the lower ends. This shelf can be lowered and raised like a window sash. For this purpose it is connected at each end by sash cord over a pulley to a lead weight which is heavy enough to more than raise the shelves. It has the cord so adjusted in length that when the shelves are elevated so that the bottom one is level with the top of the table the weight rests on a support (not shown in figure). The shelves can be depressed until the top of the upper shelf is continuous with the top of the bench, and a snap holds it in this position which when drawn back allows it to rise owing to the force of the weight. A kind of chain somewhat similar to a bicycle chain can be used instead of the sash cord. A partition of matched boards runs from the top to the bottom of the bench on each side of the shelf, thus separating it entirely from the drawers of the table. This arrangement overcomes several of the objections to a combined physical and chemical table. The best science teachers now consider any shelves rising above the top of the desk as a disadvantage, for it does not allow the teacher to have an unobstructed view of the whole class. This is particularly objectionable where the laboratory is also used as a demonstration and lecture room because the shelves prevent the pupils from seeing the experiments demonstrated on the teacher's desk and also give mischievous students opportunities of getting out of the master's eye. The adjustable shelves overcome this difficulty. Where physical experiments are being performed or where demonstrations are being given the shelves are lowered, and only during chemical experiments are they raised. The reagent bottles are also protected from the dust of the room.

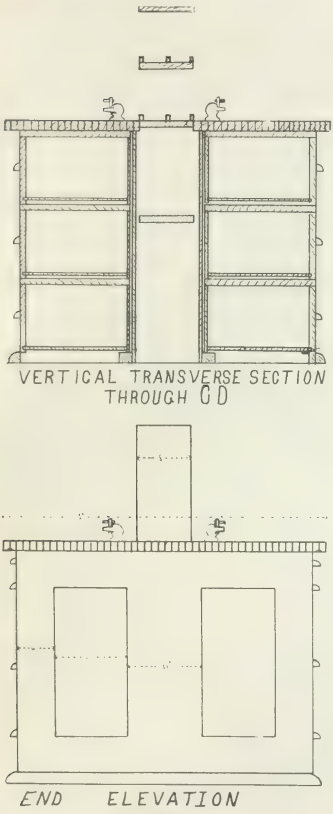
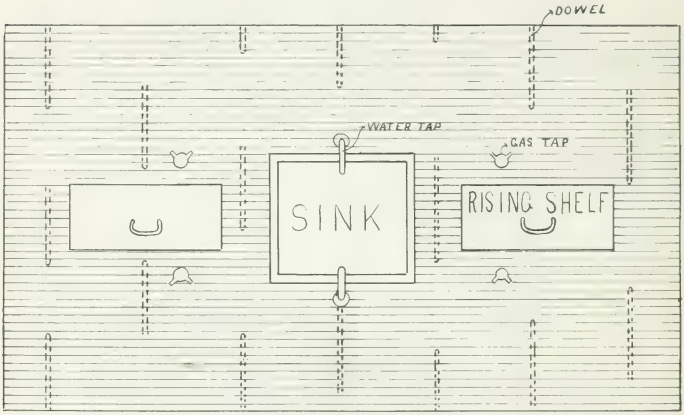


Figure 3.

Under each table in each side are three drawers at the end. Besides these there is a cupboard and three common drawers on each side. The three drawers one above the other are to serve as lockers for the pupils. Each drawer is about 16 inches deep, 10 inches high and 13 inches wide. It will take flasks, beakers, test-tube racks, etc. A slat about four inches high placed across the bottom of the drawer about 4 inches from the front in which flasks, beakers, etc., are placed will prove valuable, as if the drawer is quickly opened or closed apparatus is liable to slide along the bottom and be broken. The three drawers will accommodate three



COMBINED PHYSICS AND CHEMISTRY BENCH PLAN.

SCALE 0 1 2 3 4 5 INCHES

Figure 4.

classes in chemistry which will probably be the maximum in schools having such combined laboratories. Each of these drawers should have a Yale cylinder lock, all the locks requiring different keys and all opening to one master key. Duplicate keys should be got with each lock. The other three drawers and cupboard on each side will have no locks. They are used for the apparatus used in common by all the classes in physics and chemistry which is not likely to be broken, such as Bunsens, retort stands, crucible tongs, etc. A shelf that pulls out is placed above each tier of drawers. This gives a clean surface on which the student's note-

book may be placed. A complete partition should be put over the bottom and middle lockers in each tier, so that they cannot be pulled out and the contents of the one below rifled. All the drawers should have a button on the back to prevent them from being inadvertently pulled entirely out and the contents upset or broken. This button, however, by being turned should allow them to be completely withdrawn as this is necessary from time to time in order to clean them.

One or two gas taps rise above the top of the desk at the back of each student's place. The drawings show a single large sink 17 inches long by 14 inches wide at the centre of each table top. This has a tap at each side which will be used by the two students working on that side of the table. A cover should be supplied for the sink which can be placed on it so that the top will be flush with the table. Jointed water taps can also be supplied that can be folded over into the sink and thus give a clear sweep for the whole top (with the exception of the gas taps) for experimental work in physics. If the electrical supply is distributed to each desk suitable terminals can be placed at the end of the table-top, one set for each student. The drawings do not show uprights with a cross-beam such as is used on physical benches. Such uprights can easily be added and will prove very useful in physical work and do not offer much obstruction to the view.

Many variations can be made in this desk to suit individual needs. The tables can be made long enough to accommodate six students or even more and thus fewer desks would be required. This may be necessary in order to make them fit into a room very long and narrow, or into one that is almost square. The adjustable shelves may be omitted if each student is not supplied with a set of reagents or the reagents may be kept in small shelves in the side; but reagent shelves permanently fixed above the top are not to be recommended. Two smaller sinks could be used instead of the one large one, and the number of drawers might be curtailed, but this will be at the expense of efficiency. The qualities of material and finish will also vary to suit the finances of the Board and the other furnishings of the building.

The material of the top has been already discussed. The exposed parts may be made of pine, ash, maple or birch according to taste. The drawers may be made of basswood with birch slides. If uprights are used they should be made of birch or teak. The top and all exposed parts should be finished as the tables described in the September article. The taps both water and gas should be gun-metal, as brass and nickel will tarnish and look bad. The drawer pulls are best made of wood as metal will not withstand the acid fumes. They should project as little as possible.

General Methods in Teaching

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SO complex and difficult is the art of teaching that many teachers would warmly welcome any general guidance or working formula that might offer simplification or easement of that task. Such general precepts however, to be really useful and not actually pernicious, must in no way reduce the teacher's work to a mechanical process nor fetter or destroy his originality. To this end they must be few in number and therefore comprehensive, their general character must be clearly seen, and their relation to particular cases rightly apprehended. What the great circles are to the ocean navigator in preventing undesirable deviations from the shortest course, these general methods must be to the teacher in giving direction to his various efforts.

Professor Edward L. Thorndike says that any problem in education may be put into the form, "given a certain desired change in a man (or child) what *situation* shall we create to produce it, either directly or by the response which it provokes from him?" The teacher's problem, then, is to create the adequate *situation*. *Situation* here includes the presented matter or stimulus as well as the attitude of the learner and the *change* is the desired growth or acquisition. Let us suppose a teacher before a class he knows, and having in hand a subject he knows, what are the general principles of procedure by which he may produce the desired change? The method will vary with the change to be effected, that is, with the new acquisition to be made. This change may be conveniently put under the following heads:

1. The acquisition of Knowledge of individual concrete wholes.

2. The acquisition of Knowledge of the relation existing among a number of individuals—that is, the acquisition of general laws and abstract truths.

3. The acquisition not of Knowledge but of some form of skill, as writing, drawing, manual arts, etc.

The young and immature mind sees things first as individual, unrelated wholes, and if growth in Knowledge of a thing is to take place, there must first be a differentiation of the comparatively meaningless homogeneity which makes up the thing, that is, there must be an *analysis* into parts which must again be held together to form the whole. This differentiation differs widely in individuals and depends upon the irreducible power of the mind to discriminate or to note differences. The

synthesis of these discriminated parts, necessary to reconstruct the object depends on the mind's power to note likenesses. In elementary education it is essential that the child should get an intimate knowledge of the characteristic marks and properties of objects. These objects may not be merely material things but may consist in any of the individual experiences of the child. To gain this knowledge there must be unceasing analysis through direct contact with things and participation in various experiences.

Pupils in the High Schools and in the higher grades of the Public Schools become less exclusively interested in things themselves, having already partly satisfied their sense-hunger and curiosity concerning them, and appreciate more and more the relations of things to one another and the general laws which express these relations and help us to hold many things in one view. For the establishment and application of these laws the Inductive-deductive method which finds in its treatment no application to particular instances is often of very little practical value to the teacher, for whom the chief difficulty frequently lies in his inability to connect the concrete work of the class room with his theory. An illustration, however, of the application of this method (with its five formal steps) to the teaching of grammar in a Senior IV. Class is given in this number of The School by Mr. Scarrow of the University Schools, so that nothing more than the briefest definition of it is attempted here. Induction is the instrument for gaining general principles. When these are in possession, knowledge may be extended by their application to new realms of fact and this application is deduction. Induction starts with particulars and by analysing these, discovers universal relations which they embody and thereby constructs a system which explains them. Deduction brings particulars under some general principle which is assumed or admitted to be true, and in the light of this principle interprets them. This inductive-deductive activity of mind, based too, like analysis-synthesis, on the same fundamental faculty of noting likenesses and differences, brings into intelligible and meaningful relation the individual facts of experience which otherwise would remain in meaningless isolation.

These two methods may be more briefly given as follows:

1. When dealing with an individual thing.

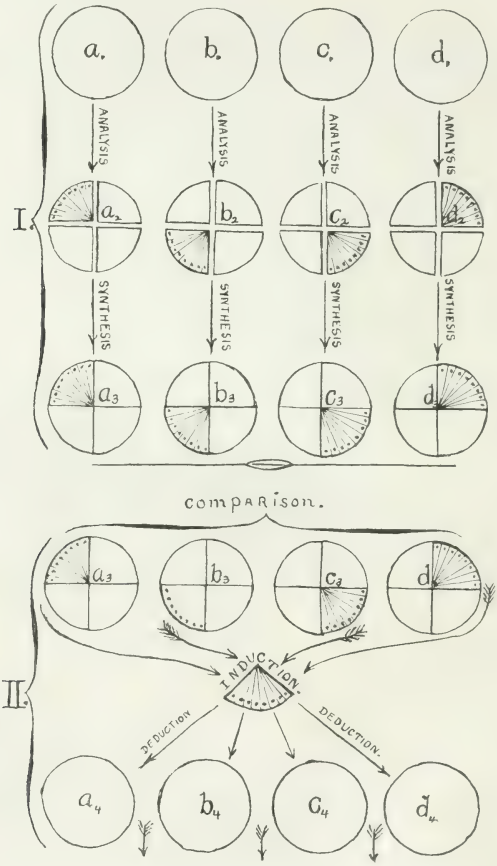
(*a*) *Analysis*, to bring into relief the involved contents or elements of the thing.

(*b*) *Synthesis*, to hold these discovered elements together as one unit thus constituting a fuller knowledge of the thing and changing it from a vague to a definite whole.

2. When dealing with a number of things comprehended as in (*a*) and (*b*) of 1, to understand their *relation*.

(*a*) *Inductive inference* based on comparison founded on likenesses and differences leading to a generalisation.

(*b*) The *deductive application* of this generalisation to particulars legitimately included under it.



Thus we begin with individuals and return to individuals, the four processes constituting the two methods the Analytic-Synthetic and the Inductive-deductive, leading us from particulars vague and merely apprehended to particulars illuminated and nationalised by law.

The importance of neither 1 nor 2 should be overlooked. Educators who neglect 2, leave the learner in possession of a world of isolated facts, the world of the savage. They fail to see that individual facts however clearly known do not form Scientific, *i.e.*, real knowledge, and that while the learner must begin with analysis he must end with system; that he must pass out of the concrete and into the realm of the abstract, to return again to the concrete in the light of the abstract, before the concrete can be understood.

Those who neglect 1 and (*a*) of 2 keep the learner too exclusively dealing with abstractions and divorced from the concrete. They fail to see that the abstract is but a key to the true understanding of the concrete and not an end in itself.

3. When dealing with the acquirement of some form of skill.

(*a*) Set up an ideal to be reached.

(*b*) Analyse the steps necessary to reach this. (1) Treat the steps separately. (2) Combine them.

(*c*) Encouragingly criticise the effort made.

(*d*) Incite to new effort and practice in the light of the criticisms given.

The relation of Analysis-Synthesis, induction and deduction may be indicated by the accompanying diagram when read from top to bottom.

1. When dealing with the individual wholes.

2. When dealing with groups of individuals.

The diagram is meant to bring into relief the following points:

1. That the natural starting point is the unanalysed, concrete, individual wholes—the a_1, b_1, c_1, d_1, of the diagram.

2. That the first mental operation is a distinguishing of parts within the wholes—a_2, b_2, c_2, d_2, that is, analysis based on the fundamental faculty of noting differences. (Note that the parts of a_1, b_1, c_1, d_1 are seen in a_2, b_2, c_2, d_2.)

3. That the elements thus disassociated by analysis must be mentally reconstructed into wholes a_3, b_3, c_3, d_3, that is, there is *synthesis* based on the fundamental faculty of noting likenesses. In this case the likeness consists in being parts of the same whole.

4. That by this analytic-synthetic act (for though analysis and synthesis may be thought of separately they are but two aspects of the one act of mind) the change from a_1 to a_3, b_1 to b_3, etc. (and each of these would probably represent what would be done in any single lesson) shows that knowledge has been made more specific and concrete.

5. That the Analysis-synthesis of 1 must take place before the work of *induction*, the basis of which is comparison, can take place.

(This shows how important it is that the elementary work of learning things by analysis should be thoroughly done.)

6. That generalisations obtained by induction through comparison enable us to co-ordinate a great number of facts. a_1, b_1, c_1, d_1, may now be grouped together through the common element discovered in them in a_3, b_3, c_3, d_3.

7. That this generalisation, the result of a true induction and not a mere colligation must transcend the limits of actual investigation, that of a_3, b_3, c_3, d_3, and infer under the assumption of the uniformity of nature, that what is true of a_3, b_3, c_3, d_3, will be true of a_4, b_4, c_4, d_4, and of all others under like conditions.

(A comparison of the steps in detail and the general movement of thought, as shown in any lesson where a general principle is established, with the diagram part by part might be interesting.)

From the whole it is seen how study increases both the complexity and simplicity of the world, exhaustive analysis and synthesis giving infinite richness and complexity, and wide generalisation giving comprehensive simplicity.

Suggestions for the Class-room

A School Garden in the Town.—A city school in Chicago has taken a vigorous method of starting a school garden. The class formed a garden club with officers among the pupils. As there was no ground available they scoured the vicinity for a suitable vacant lot, readily got the consent of the owner and laid it out in beds eight feet square. Two Normal School students were elected as supervisors and the pupils set to work. Garden tools were brought from home, seed catalogues were studied, and the garden was successfully planted and harvested. When the club was reorganised in September it had a membership of over ninety. Could not any town or city school successfully operate such a voluntary club?

Playground Activities.—Through no avenue of the school can the teacher come so close to her pupils as the play avenue. Free from the customary restraint of the class-room the pupil finds real life, bounding, bursting, full and free; his outbursts are spontaneous and he is in a position to work out unhampered his own destiny. It is the common meeting ground of all, rich and poor, strong and weak, farmers' sons and lawyers' sons, all striving to become men. Here the teacher meets the boy and girl as they really are, a new bond of sympathy is established, a closer sense of touch formed. Through no channel can we establish that feeling of friendship and closer relation so essential to successful school work.—D. S. Wood in the *Western School Journal*.

A Lesson in Grammar—Senior IV. Class

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General Topic.—The objective predicate adjective, as an illustration of the Inductive-Deductive method of teaching.

I. Preparation.—

1. Review of subjective predicate adjective.

The *clothes* ARE dry.
The *stick* IS straight.

Have pupils divide sentences into subject and predicate and underline bare subject and verb.

T. In the first sentence what does the word "dry" do? P. "Dry" completes the verb "are" and modifies the subject "clothes".

T. What do we call a word used in this way? P. We call it a subjective predicate adjective.

T. Why an adjective? P. Because it modifies a noun.

T. Why a predicate adjective? P. Because it completes the verb.

T. Why subjective? P. Because it modifies the subject.

T. What then is a subjective predicate adjective?

NOTE.—See that each definition given meets the three requirements.

T. What other example have we? P. "Straight" in sentence 2.

T. Give other examples.

2. Statement of Aim—by the teacher.

In our lesson to-day we shall find that there is another kind of predicate adjective.

II. Presentation.—Sentences chosen by the teacher and examined by the pupil under the teacher's guidance.

The *girl* WRINGS the clothes dry.
The *carpenter* MADE the board straight.

Have pupils divide sentences into subject and predicate and underline bare subject and verb as before.

T. Now let us consider the word "dry" as used in the sentence. What is the function of "dry" in the sentence? P. "Dry" modifies the noun "clothes".

T. What part of speech, then, is "dry"? P. "Dry" is an adjective.

T. What else does "dry" do besides modify the noun "clothes". (No answer.)

T. Does the word "wring" tell all that the girl does to the clothes? P. No. The girl *wrings dry* the clothes.

T. What, then, does "dry" do besides modify "clothes"? P. It seems to complete the verb "wrings".

T. Why do you say it *seems to complete* the verb "wrings"? P. It helps "wrings" to tell what is done to the clothes.

T. What, now, is the relation of "clothes" to the verb? P. "Clothes" is the object of the verb.

T. Now, let us see what we have found out about the word "dry". P. (1) "Dry" is an adjective. (2) "Dry" completes the verb. (3) "Dry" modifies the object of the verb.

These conclusions to be placed aside on the black-board (in Summary).

T. Examine the second sentence and see if you can find a word having a similar use. P. The word "straight" completes the verb "made" and modifies the object "board".

Or by questioning as before if found necessary.

T. What, then, is the use of "straight" in this sentence? P. (1) "Straight" is an adjective. (2) "Straight" completes the verb. (3) "Straight" modifies the object.

(Black-board Summary.)

If it is considered necessary other examples may be treated in the same manner and conclusions summarised on the black-board.

III. Comparison and Abstraction.—The work of the pupil.

T. Now let us consider all of these examples. How are dry, straight, etc., alike? P. (1) They are all adjectives. (2) They complete the verb. (3) They modify the object.

IV. Generalisation and Definition.—The work of the pupil.

T. We have many words used in the same way as these. What are their characteristics? P. They are *adjectives* that *complete the verb* and *modify the object.*

T. We call words thus used objective predicate adjectives.

T. How would you define objective predicate adjective?

Have several pupils give definitions. These may be variously stated but the teacher selects one of the best and writes it on the board.

Note.—As the name so fully describes the function and as the pupils understand the significance of subjective predicate adjective, it might be well in this case to ask pupils for a suitable name for words having this new function, but ordinarily the teacher must give the name and avoid anything like guessing.

V. Application.—New examples to be included under the definition.

1. Examples given by the teacher.

Green *apples* MADE the boy sick.

The *farmer* FILLED his barn full of grain.

T. Point out the objective predicate adjectives in these sentences and tell why you so consider them.

2. Examples given by the pupils.

They PAINTED their barn red.

He PLOUGHED the furrow deep.

Have each pupil show that his example fulfils all the requirements of the definition.

3. Assign an exercise for seat work.

Example: Ex. 126, p. 224, P. S. Grammar.

As an additional exercise after the pupils have a pretty thorough grasp of the subject, have a number of pupils each write on the board a sentence with an underlined example and let the class show whether the examples are correct or incorrect.

As to Method.

While the lesson has been presented under the five formal divisions of the Inductive-Deductive Method, a careful examination of the several steps will show that there is no definite point where one step ends and the next begins. The processes of abstraction, comparison and generalisation go on simultaneously, but as the induction proceeds the emphasis moves from one process to the other in the order given above. The first four divisions of the method are inductive, leading to a generalisation expressed in a definition. The fifth division is deductive, bringing new examples under the light of the definition and making this definition more and more comprehensive.

This lesson and Dr. Slemon's article in this issue are intended to supplement each other and should be so studied.

School Superintendent (cross-questioning the terrified class): And now I want you boys to tell me who wrote "Hamlet".

Frightened boy—"P-p-please, sir, it—it wasn't me."

That same evening the superintendent was talking to the squire of the village. The superintendent said:

"Most amusing thing happened to-day. I was questioning the class over at the school, and I asked a boy who wrote 'Hamlet'. He answered tearfully, 'P-p-please, sir, it wasn't me'."

After loud and prolonged laughter, the squire said:

"That's pretty good; and I suppose the little rascal had done it all the time!"—*Philadelphia Evening Times.*

Interpretation of a Contour Map

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THERE is no doubt that in geography teaching, full use is not made of the maps and particularly is this the case in the teaching of physical geography. The maps are largely used to indicate the relative positions of cities, rivers, lakes, mountains, etc. The ordinary geography maps emphasise relative position of places and particularly the facts of political geography. It is true that hachures are used to indicate mountains but these generally give no true idea of anything but the position of the mountains, and only the vaguest indications of the steepness of the slope and the relative heights of the various elevations. Slopes that are not abrupt enough to be mountain sides are not indicated at all. It is true there are hachured maps that indicate all the slopes and by the number and intensity of the lines mark fairly well the angle of slope. On such maps the whole surface is marked with hachures and hence any other markings such as rivers, cities, roads, etc., cannot be indicated with much clearness as the hachures darken the whole surface.

It is now practically decided by all geographers and scientists that in order to give the greatest amount of information about a district both as to relative positions and elevations, the elevations must be expressed by contours.

Contours are lines of equal elevation on a map. All the great scientific maps issued by the topographical departments of the European and American countries are of this nature. The United States has issued thousands of them of different parts of the country so that over one third of the whole country has been covered. The Ordnance Survey of Britain has covered the whole of the United Kingdom by several sets of such maps on different scales. The same is true of the other countries of Europe. All military maps of any great value are of this type. Even in standard works such as the Encyclopædia Britannica many of the maps are of this character. Unfortunately little has been done in Canada up to the present towards mapping the country in this way. Our Geological Survey has issued a few, the Minister of Militia several, and the Bureau of Mines of Ontario has contoured Cobalt and a few other mining regions.

These contour maps are particularly useful in the teaching of physical geography. One of the chief topics of this subject is the different land forms and their origin. Plains, plateaus, glaciated districts, volcanic

districts, deeply eroded districts, deserts, etc., are largely mere words conveying no definite visual idea to an ordinary pupil. How can they be made real? The regions might be visited, but this is seldom possible and even if visited the cursory examination of it by piece-meal would probably give real ideas of a few details but the pupil would not grasp the details combined as a whole with certain common features. Pictures can help and oral description may be of value but it is pretty well decided that the clearest conceptions of an extended region as a whole and in detail can be best obtained by a careful study of a contour map of a district. No proper explanation can be given of the origin of the land forms until a mental picture of these forms themselves is presented to the mind. This has been the method in the best type of American High School for some years and a good deal of attention has been devoted to it in England. Physical Geography has become a laboratory subject, and the material for practical work is largely contour maps as far as a study of land forms and their modification is concerned. It is only necessary to look at any of the recent text-books to convince oneself of this fact. The outstanding text of the present day is Salisbury's Physiography. It contains over forty contour maps and recommends for practical work over two hundred others. Tarr and Von Englen's laboratory manuals of Geography base much of their practical work on these maps. Unfortunately, the book authorised in Ontario has only one contour map; but the reason for this is that accompanying the original edition is a laboratory manual that bases the work to a great extent on contour maps.

We have done practically nothing along this line in Ontario, and I propose to give a sample contour map and to hint how it may be treated.

Each student should have one of the maps before him. Copies can be made of the one illustrated by a neostyle or by carbon paper.

Call the pupils' attention to the significance of the different marks on the map.

Size.

Q. What is the approximate area of the district represented on the map? A. About 105 square miles.

Q. How does that compare with the township in your district? A. About the same size.

The Meaning of Contours.

Q. What difference in altitude is there between two adjacent contour lines? A. 100 feet.

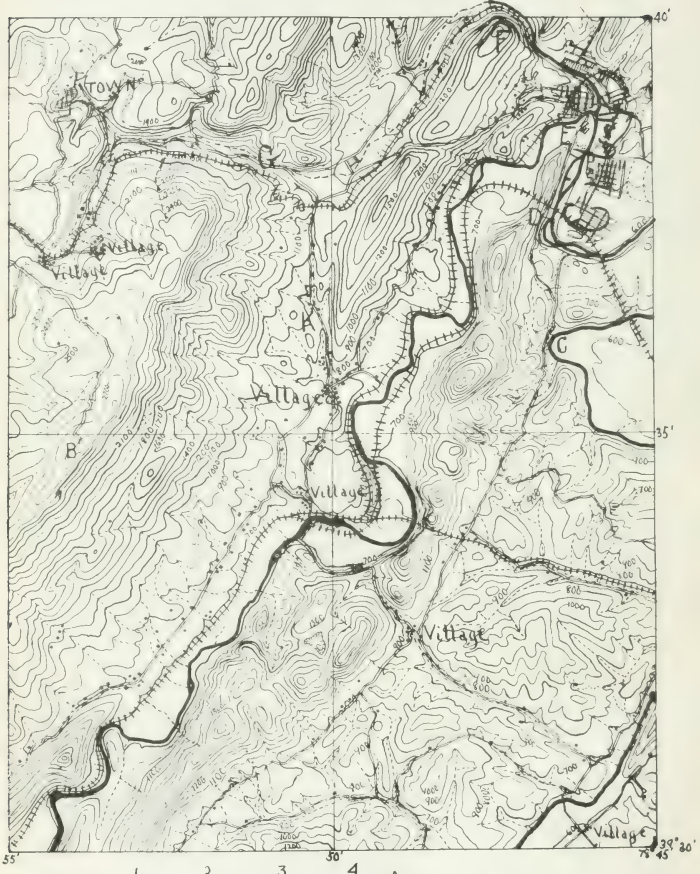
Q. When the lines are close together what does that indicate regarding the surface? A. A steep slope.

Q. When the lines are far apart? A. A more level district.

The Surface Contours:

Q. Where is the highest part of the land? A. At B.

Q. What is its height? A. Over 2800 feet.



[Copies of this map, in lots of 25 or more, may be had on application to THE SCHOOL, at the rate of one cent each.]

Q. Where is the lowest part and what is its height? A. Along the river in the south-east corner which is 600 feet high. Also along river C.

Q. How many chief ranges of mountains are there and in what direction do they run? A. The two chief ranges, one south and one north of the main river; they run from north-east to south-west.

Q. Which is the higher? A. The more northern one which is 2700 and 2800 feet high, while the more southern one is 1800 to 1900 feet high.

Q. If these mountains were viewed from the side what appearance would the top have? A. It would be a fairly level line varying a little in height along the crest. It would have a wavy top.

Q. Where is the most level land? A. Along the rivers.

Q. How would you account for this land being level? A. It is the flood plain of the river.

The Rivers.

Q. What position have the rivers? A. Along the lowest slopes.

Q. Where does a contour cross the main river? A. At D.

Q. What is the height of this contour? A. 600 feet.

Q. What is the height of the river along the most of its course shown in the map? A. Between 600 and 700 feet because a 700-foot contour runs along each side of the river.

Q. Which way does the river flow? A. It must run north-east as the 600-foot contour crosses it at D.

Q. Where does the river in the south-east corner empty into the main river? A. To the east.

Q. Why? A. Because it lies between 600-foot contour lines so its level is less than 600 feet, while the main river for the greater part of its course lies between 700-foot lines.

A. What relation have the rivers and the mountains? A. The rivers run in the same direction as the mountains and in the valleys between them.

Q. Is the main river valley wide or narrow compared with the mountains? A. It is quite wide and flat.

Q. Where did the material come from to partially fill the valley? A. It was eroded from the mountains.

Q. What does the wide flat valley indicate as to the age of the region? A. It must be old to have had time to wear down so much material.

Q. What else would indicate that this is a very old region? A. The fact that the rivers have cut down gorges across these mountains.

Q. Where has this happened? A. At E, F, G.

Q. To what depth have these gorges been cut? A. At E, 400 feet; at F, over 1000 feet; at G, 1400 feet.

Q. How do these compare with Niagara Gorge? A. They are very much deeper.

Q. Which is the steepest? A. The one at F as the gorge is almost perpendicular for the contour lines almost touch one another. (One of the chief attractions of the neighbouring city is the famous river gorge to the north-west.)

Q. How does this region compare in age with the district in which you live? A. It is very much older than any part of Canada. (By this I mean that the eroding agents that have given it its present form have been acting longer than the agents now acting on Canada, for the present eroding agents in Canada have only been acting for a comparatively short time—since the glacial period—but the agents of this region have been acting for a much longer period.)

The Rainfall.

Q. Count the number of creeks that enter the main river from the north-west and from the south-east? A. Sixteen from the north-west; four from the south-east.

Q. What would you infer regarding the amount of rainfall in the district? A. A medium rainfall.

Q. If there is a river in your district how many creeks empty into it in a course as long as that represented on the map? A. Probably in Eastern Canada there would be fewer.

Q. Why are there fewer tributaries on the south than on the north? A. A smaller area is drained as the divide is nearer the river at the south than at the north; also the slope is so much steeper at the south that the water would run off very rapidly almost as soon as shed.

Q. How do the contours turn in crossing a creek? A. They bend away from the mouth.

Q. What does that signify? A. That the creeks have dug out deep valleys.

Culture.

Q. How do the roads differ from those of your district? A. (The answer will depend on the district, but I will take for granted it is a well settled farming district such as is met in the more thickly settled parts of Eastern Canada.) The roads are not so numerous nor so straight.

Q. What is the cause of the difference? A. The country is very mountainous and roads are difficult to construct and probably it is thinly settled.

Q. Where are the roads chiefly found? A. In the valleys and level parts.

Q. Why? A. Because they are easier to construct, will have fewer grades and in the valleys the industries will be carried on.

Q. Follow the two main roads parallel with the river and see how many contour lines they cut? A. They cut very few indicating that they are fairly level.

Q. Why do the railroads follow closely the river valleys? A. Because the valleys are level and give good grades.

Q. Count the cross roads going south from the main road south of the river? A. Five.

Q. Count the number going north from the main road north of the river? A. There is only one (at K) and it follows a deep gorge.

Q. How would you account for the difference? A. The mountains are so much higher north of the river that communication across it is almost impossible.

Q. Why was the road built to B? A. Probably because it was the highest point in the region and was visited by tourists and sightseers.

Q. Count the number of villages, towns and cities in the district? A. Six villages, one town and one city.

Q. How does that compare with a district of equal area in Ontario? A. In Ontario the villages would usually be more numerous.

Q. Can you account for the situation of the villages? A. They usually occur where two important roads cross.

Q. Count the number of houses along the two main roads and reckon how many there are per mile and compare it with the number in the rural part of your district? A. It is rather sparsely settled.

Q. Where are the houses chiefly located? A. Along the roads in the flat valley land.

Q. What is probably the occupation of the people in the settled parts? A. Agriculture.

Q. What form of Agriculture? A. Pasturing, because the houses are so scattered, and the settled parts in the valleys are too irregular in surface for farming.

Q. What is the nature of the situation of the town? A. It is in the midst of the mountains, on no body of water and very much isolated.

Q. What would you suspect as the chief industry? A. Mining of some sort. (It is the centre of a coal mine.)

Summary.

What are the evidences that this is a very much eroded district?
What is the effect of mountains on means of communication?
What relations have river valleys to roads and railroads and why?
In what parts of a district are the most numerous settlements?

Drawings to be made by Pupils.

Let a tracing of the map be made marking in the contours at intervals of 400 feet. Let all below 600 feet be coloured red, between 600 feet and 1000 feet orange, 1000 feet to 1400 feet yellow, etc., going through the spectral colours. Such a drawing is an orographical map. Let the houses be indicated, and their relation to the lowlands will be evident. Mark in the streams and then draw lines to indicate the watersheds. This will show the relation of the crests to the watersheds. An excellent exercise is to draw sectional drawings along certain lines. Draw a horizontal line to represent sea-level. Make this line the same length as the line along which you are drawing the section. By means of dividers mark off on it by points intervals equal to the intervals between contours cut by the sectional line. At each point erect a perpendicular equal to the height of the contour (say 1 inch equals 800 feet). Now join the tops of the perpendiculars by a curve and this curve will represent the slopes along the sectional line. Such sections along roads, railroads, across mountains and valleys will visualise their relative slopes and make them excellent for comparison.

Suggestions for the Class-room

Decoration.—I have covered the wall between two windows with green calico. On this I have pasted small size weaving mats all around for border. The centre is filled with sewing cards.

This part of the room is then for the little folks of the lower grades. I put only the ones that are neat and clean. The children know this and try their very best to get their cards as neat and clean as possible. The little ones watch very closely here to see if their cards come up.—Valmina Loe in *School Education*.

Nature Study as an Aid to English.—Teachers of English everywhere, in the grades, in high schools, in colleges, see the need of greater naturalness and ease of expression in all English work. When we get children alive to the world of interesting things about them, get them to observing, questioning, experimenting, reasoning, and enjoying, then, I believe, we shall have spontaneous, eager, joyous, natural expression. Often a pupil who experiences great difficulty in expressing himself clearly, who finds the English language quite unmanageable in the ordinary recitation, will, after taking part in some experiment in which he is deeply interested, be able to stand before the class and explain the process of the experiment in clear, forcible English, and thereby gain considerable power in self-expression.—Maude I. Steele in the *Educational Bi-Monthly*.

The Reading Process

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N.B.—The present article is but a brief general statement of the facts. The article on "The Contributions of recent Psychology to the Subject of Reading", to appear in the next issue, will deal in detail with the different phases of the process.

WHAT does the pupil do normally when he reads? To the casual observer who watches the eye of another scan the printed page or who even becomes casually introspective, the process seems one of the utmost simplicity. Words successively and automatically flashing into distinctness, a slight thought of mental traversing of lines, a sort of inner utterance of what is being read, together with a developing conception of the meaning of it all seems to exhaust the process. But the investigator who is not content with seeing the act from the parquet merely, but who retires behind the scenes and analyses the wonderful mechanism by which the stage director produces these results discovers that behind this apparent simplicity there is an astounding complexity of process.

One might venture the opinion that for the average reader a knowledge of the workings of such a complete process—however instructive it may be—is wholly unnecessary. It sufficeth that he "get the answer", in other words, that he can glean the thought from the printed page. But in these days when the physical well-being of the child is deservedly receiving a more sympathetic and enlightened attention, when the results of psychological investigations regarding child nature and child development are so suggestive—indeed so imperative—and when the general study of teaching problems is so earnest and all-sided, for a teacher to refuse to become a student of such problems is to admit defeat as a teacher before the first ditch is won.

That we read for the thought content is so universally admitted and so self-evident that any argument in support of it is wholly superfluous here. Words, like window panes, are things to look through, not things to look at, the process—par excellence—is that of grasping the thought. Hence reading may be tentatively defined as a *process of thinking*. In its essential characteristics, therefore, it cannot differ from the thought process wherever found. Its special peculiarity lies in the manner in which the thought process is stimulated. In ordinary conversation the spoken word becomes the *auditory image* which stimulates the thought process. In reading the printed word becomes the *visual image* which

sets off reflexly a sensori-motor activity which stimulates the thought process. Reading may be more exactly defined, therefore, as *a specialised mode of thinking, i.e.*, a mode of thinking that is stimulated in a special way, viz., by means of printed or written matter through a special end organ, the eye. We thus see that reading is psycho-physiological in its nature.

On the physiological side the chief investigation lies in an examination of the work of the eye. The eye's behaviour; the speed, nature and number of the eye's movements; the length and variation of the reading pauses and all such kindred points are matters about which the teacher should be tolerably conversant. These functionings which reading imposes upon the eye, if carelessly performed, cause fatigue and dangerous forms of degeneration such as myopia and nervous exhaustion. As we have mentioned above, the awakening sympathy in the physical well-being of the child will make it imperative that teachers possess at least sufficient knowledge of these things to enable them to prevent this unnecessary child-suffering.

On the physical side the problems become more numerous and interesting. First and foremost, of course, is the question of the thought process itself. Our conception of the thought process must largely determine our method not only in the upper grades but also in the primary. Upon this standard we must settle all such questions as whether the consciousness of the child should be centred upon the ideas or upon the form of the word; whether oral reading is word-naming or thought-giving; the extent, value, etc., of silent reading, in fact all problems which vitally connect themselves to this centre.

With these problems we shall endeavour to deal in our next issue.

A teacher who knew something about human nature as well as books recently put all his knowledge to practical account in a story which is going the rounds of the eastern papers.

The school principal found that there were twelve cartloads of stone on the school grounds which his proposed improvements required moved. So instead of ordering his pupils to do it or of trying to cajole them into furnishing free labour for the benefit of higher education or resorting to a teamster or job man, the teacher set tin cans up as targets in places where he wanted the stones piled and invited the 800 boys to try their skill at marksmanship. The boys had a lot of fun and the stones were speedily removed without cost.

The incident illustrates the fact that there is frequently an easy way as well as a hard and tedious one to accomplish a given task.—*Des Moines Tribune.*

Pencil Drawing in October

A. AUTA POWELL
Normal School, Toronto

MOST human beings feel that in some respect or other they are "Lame from birth," that is, that they have not the same power to express themselves as others. Yet it is well to remember that the lame man may advance, even though it be s'owly, and, if he have a goal in view, wi l in time reach it. Every school room has ts examples of the lame with a purpose who have outd stanced the strong who were carelessly secure in their strength. Just why the average teacher should feel his lameness in drawing more keenly than his other imperfections is a mystery. He will cheerfully cover the blackboard with writing though

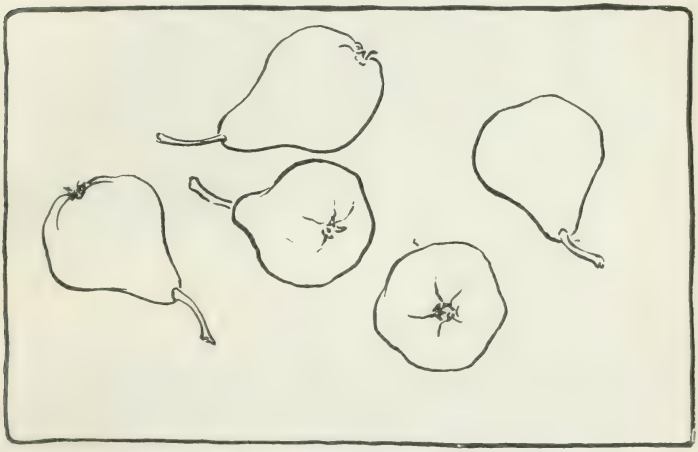

Figure 1.

every letter be incorrectly formed, and he will not hesitate to expound and explain though his voice be harsh and lacking in modulation; but, when it comes to the making of explanatory sketches he falters, so painfully conscious in this case of his defects that he cannot use this telling means of making his work more effective.

The teacher is urged to make as frequent use of drawing as possible because he who illustrates his lessons will one day discover that his class is drawing freely and naturally. This article is intended to suggest how

he may acquire freedom in this method of expression, and to give a series of exercises for October, that will emphasise drawing which the teacher may first work out for himself in the manner indicated and then take up with his class in the same way, provided the class is above the Junior Third Form.*

Although one may paint with a pencil and draw with a brush, the pencil is the medium usually associated with drawing. A moderately soft pencil, from four to five and one-half inches long, is the most convenient for our purpose.

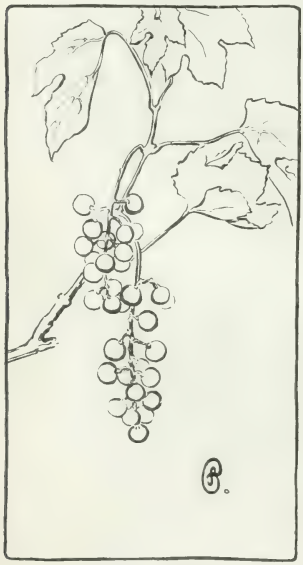

Figure 2.

If one could walk abroad with sketch-book and pencil, making interesting notes on the way to and from school, without attracting attention, this would be an excellent method of gaining facility in drawing. A better plan is to make mental notes and to jot down all that can be remembered when the privacy of one's own room is reached. So valuable did William Morris Hunt consider the training involved in thus learning to draw from memory that he admonished his students to count that day lost in which they failed to make a memory drawing. There is no time or place that does not lend itself to the practice and the teacher will do well to follow the artist's injunction and advise his pupils to cultivate the habit of making sketches from memory.

It is, however, accurate drawing from the object itself of which I wish to speak more particularly.

The vivid colouring of autumnal flowers has probably induced the teacher and his class to devote the month of September to painting flowers in colours, and now the month of October may profitably be set apart for the drawing of fruits in pencil outline.

Apples or pears are not in themselves particularly attractive except in so far as they appeal to the palate, to be beautiful they must appear in their natural setting; yet studies such as Figs. 2, 3 and 4 present difficulties too great for a beginner, and he must prepare for them by practising the drawing of the shapes involved.

* The lessons suggested are not suitable for classes below the Third Form in the Public School.

Select a good specimen, with a stem, of any common Canadian fruit, preferably large like the apple, pear or peach. Before drawing it, note the variations in its contour from the curve to straight line. Use a good-sized sheet of paper and, with the pencil held lightly under the hand, block in the actual size and shape of the fruit with faint sketchy lines near the centre of the paper. Next hold your paper at some distance from you and compare with the model concerning proportion, contour, direction of the stem, and placing of the blossom end in relation to the stem. Keeping your line faint make any necessary corrections. Do not worry about light and shade, or texture; fix your attention on shape and do not consider your work finished till you have made as truthful an outline as you can of the identical specimen that you are drawing. If you are careful to keep your lines faint at first, gradually strengthening them as the correct shape grows under your pencil, very little if any erasing will be necessary. When you do rub out any lines, use a very soft eraser that will not injure the paper. Having made one sketch, turn the specimen so as to give yourself a different view of it and proceed as with the first position, trying as you place each new sketch, to make as pleasing an arrangement as possible on the paper. As you work in this way, feeling for the shape, you will discover before you have made very many drawings that you are beginning, almost unconsciously, to express texture and place accents. Furthermore, you are making a collection of drawings valuable for future reference because of their accuracy.

Figure 3.

A sheet of drawings of fruit like Fig. 1 may be followed by a similar sheet giving several views of a single leaf. A twig with the fruit and a few leaves hanging from it may be attempted next. This should be chosen for its beauty and simplicity, any unnecessary

leaves being removed. Great care should be taken to arrange the drawing on the sheet of paper so as to make a pleasing composition. The whole sketch should be lightly blocked in and corrected before any part is finished.

Figs. 2 and 3 were drawn in accented line with brush and India ink from a pencil drawing. Unfortunately the reproduction of pencil drawings necessitates a process too expensive to permit of their use in a magazine of this kind.

Outline pencil drawings may be made more attractive if light washes of the natural colours slightly grayed are applied to the parts, the result being a coloured drawing, not a painting.

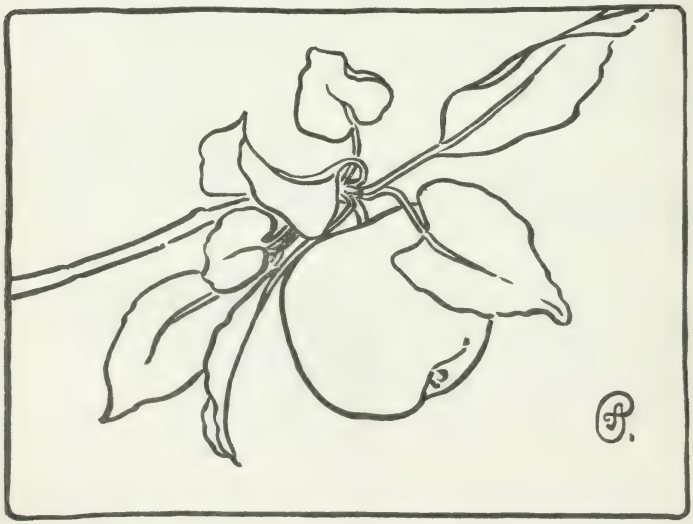

Figure 4.

In Fig. 4 the outline has been simplified and rendered in unaccented line, thus making a decorative composition that is quite different in effect from the other illustrations which are handled more pictorially.

Compositions rendered in unaccented line may have the background and other shapes covered with grayed washes in any desired colour harmony, and may be attractively used in the working out of such problems as book and programme covers.

SUMMARY.

General:

1. Use a moderately soft lead pencil, from four to five and one-half inches long so that it will slip easily under the hand, and hold it loosely under the hand an inch and a half or more from the point, exercising no pressure until the outline is accurate.

2. Cultivate the habit of making memory drawings.

3. Illustrate all your notes in History, Literature, Geography, etc.

4. Work out each lesson in drawing by yourself, then take it up with your pupils.

Particular:

5. Choose some fruit with its stem and make pencil drawings in outline, in different positions, working for accuracy.

6. Treat the leaf of the fruit tree in the same manner.

7. Make drawings in accented line of the fruit already practised, choosing a specimen on the twig so related to its leaves as to form a beautiful composition.

8. Make drawings of similar specimens using unaccented pencil outlines.

9. If you think it desirable, make coloured drawings of the sketches that are rendered in accented line.

10. Apply the drawings in unaccented line to book covers, programme covers, or similar constructed forms, finishing them in flat washes of grayed colour.

Teacher—"When did Charles I. make his greatest mistake?"
Bright Scholar—"The time he lost his head."

One of the public school kindergarten teachers in the tenement district was telling her pupils about the coming springtime. "Very soon," she said, "all the buds and pretty flowers will be bursting into bloom. There will be fragrant flowers and green grass. And something is coming back from the South and they will light on all the trees and window sills. Who can tell me what they are?"

All the children looked blank, but suddenly one little fellow's hand shot up and wriggled frantically.

"Well, Isaac," said the teacher, smiling, "I see you know. Tell us what they are." "Yes'm, cockroaches," said Isaac.

Pupil—"Montgomery's Tavern has long since been destroyed but the site is still there."

Current Events

THE era of universal peace seems far off. Wars and rumours of wars have for many months kept us supplied with sensations. We have seen Italy wrest from Turkey her possessions in North Africa. The Balkan States have driven Turkey from nearly all her European possessions and then engaged in a bloody conflict among themselves over the division of the conquered territories. In these Balkan wars alone 400,000 men are said to have fallen. For a time it seemed as if all Europe might be involved in the struggle and that Armageddon was at hand. Great Britain urged on the construction of more Dreadnaughts and is making costly experiments with military aeroplanes and oil-driven battleships. Germany has added new units to her already huge land force. France has passed an Act to increase the term of military service from two years to three. Canada has been the scene of a strenuous political struggle centring about the construction of a naval force. The amount of expenditure on her land force, never very great, has been largely increased. There has been rebellion or revolution in China, Mexico, Nicaragua and Venezuela.

Yet there are still those who believe in the feasibility of world-wide peace and who look forward to the time when an overwhelming majority of civilised people will reject as barbarous the appeal to arms and will maintain military forces only for purposes of international police service. With imposing ceremonies the Queen of Holland at the twentieth Universal Peace Conference last month formally opened at The Hague the new Palace of Peace, the cost of which, some $1,500,000, was borne by Mr. Andrew Carnegie. Here the Universal Peace Conferences and the International Hague Conferences will assemble and here will be the home of The Hague Tribunals to which it is becoming more and more the custom for nations to submit their disputes for arbitration.

President Butler of the Carnegie International Peace Endowment is conducting an enterprise that promises interesting results. Wars are caused by human beings but it is never an easy thing to place the responsibility for the outbreak of a war. Very many men are commonly concerned and sometimes, as in the Balkan struggle against Turkey, it would seem as if a whole nation found war inevitable. But in other wars the responsibility is felt to rest with some man or men representing special feelings or interests. Wars prompted by selfish interests would not occur if there was a reasonable certainty that every war would be followed by an impartial international investigation that would fix the blame where it

belonged. The first attempt to do this is now being made. A commission of the Carnegie Peace Endowment is at work in the Balkans gathering materials for a report that will attempt to fix the responsibility for the war between the allies after the conclusion of the peace with Turkey. They will report also on the barbarities said to have been committed by the combatants and on the economic waste caused by the war.

In the long run however it may be found that the cause of peace is aided more by the labours of the engineer and capitalist than by the deliberate efforts of Peace Conferences. Better means of transport, quicker and more reliable means of getting information from a distance, and the consequent spread of popular education must precede "the Parliament of Man, the Federation of the World", and the engineers and builders have been as busy of late as the professional guardians of the world's peace.

Everywhere means of transport are being improved and increasing numbers are taking advantage of it. The Pacific Ocean has been let into the completed Panama Canal and water is accumulating behind the huge dam at Gatun to fill the locks. A new ten-mile tunnel through the Alps was completed a few weeks ago. Mr. Asquith, Premier of Great Britain, told a deputation recently that the construction of a tunnel under the English Channel was receiving the attention of the British Government. Jules Verne, not so many years ago, dreamed of going round the world in eighty days and we thought it a very ingenious romance. On July 2nd, John Henry Mears, travelling for the New York *Evening Sun*, started round the world. He returned on August 6th, having made the trip in 35 days, 21 hours, 35 minutes and 4.5 seconds.

A very important effect of the increasing ease of communication and transport has been the immense migration of recent years. It is hard for us to realise that in the first six months of this year more than a million people entered Canada and the United States from the Old World. Of these people, more than three-fourths came to stay. In the same six months some 200,000 third class passengers, largely people from southern Europe who had spent a few years in Canada or the United States, left the New World for the Old and carried back with them some western ideas of comfort and of human rights and opportunities.

As something like that happens every six months it would be hard to overrate the importance of these movements as a means of education not only in politics but in standards of life and morals. What impressions of this kind do we give to the foreigners whom we meet? The future of southern Europe will be largely influenced by the ideas carried back by these returning immigrants and our own future may be more largely determined by those who remain. W. E. M.

The Round Table

The Editor of THE SCHOOL.

Dear Sir:

Now that THE SCHOOL is about to enter on its second year may I venture to offer a suggestion in the hope of increasing its usefulness and the interest taken in its contents. It has more than once occurred to me, and several teachers to whom I have spoken of the matter have agreed with me, that it would be worth while to try the experiment of adding a Round Table Department, in which teachers might, without the formality of regular contributions, have an opportunity of seeking or furnishing information, or of exchanging opinions in regard to matter relating to their school work. Speaking for myself I may say that scarcely a term passes without some point coming up regarding which I should like to know the opinion of other teachers on the same subject. I have no doubt that many others, especially of the younger teachers, have the same experience. Now, as in teaching Oral Composition we sometimes find it wise, if not necessary, to encourage a timid pupil by allowing him at first to speak from the friendly shelter of his desk instead of bringing him to the front, so I believe that many teachers if allowed the friendly shelter of a Round Table Department, would be glad to take advantage of it to ask questions, to state their difficulties, to furnish information or to express opinions and in this way the magazine would become more helpful and more interesting. As illustrations from my last half year's experience I make take the following:

(1) On what grounds do many teachers and text-book writers condemn the expressions "in our midst", "in their midst"? I have heard and seen them condemned, but I have never heard or seen any valid reason assigned for objecting to them or for thinking that they are not just as correct as "on our behalf", "in their interest". I notice that "in our midst" is given on the last page of the new High School Composition in a list of objectionable words and phrases.

(2) Should *like* and *near* ever be parsed as prepositions? I think not, unless we are prepared to admit that prepositions can be compared. In every instance, I believe, where I have seen or heard these words parsed as prepositions the words "more like", "most like", "nearer", "nearest", could equally well be used; e.g.:

(*a*) He looks like (more like) (most like) her.
(*b*) He acted like (more like) (most like) her.
(*c*) He was near (nearer) (nearest) me.
(*d*) He came near (nearer) (nearest) me.

Plainly in (*a*) the words "like" and 'near" are adjectives, describing the subject, and in (*b*) they are adverbs modifying the verb. So in every instance where one is tempted to call "like" or "near" a preposition it is an adjective or an adverb according as it relates to a noun or pronoun, or to a verb.

Substitute any true preposition, such as

He looks at (for) her. He was beside (below) me.

He came to (with) me.

And one sees at once that they express a simple relation which is not capable of being compared.

H. I. STRANG.

THE COLLEGIATE INSTITUTE,
Goderich, Ont., Sept. 3, 1913.

When entertaining some school children at her country house a certain famous spinster took them round the rooms and pointed out the beautiful things in them.

"This" she said, indicating a statue, "is Minerva."

"Was Minerva married?" asked one of the little girls.

"No, my child," said the spinster, with a smile; "Minerva was the Goddess of Wisdom."—*Thornwell Messenger.*

A teacher gave an examination on the comparison of adjectives and adverbs following a series of lessons upon that subject. One little boy was called upon to compare the word "far". With much shuffling of embarrassed feet, he replied: "Positive, far; comparative, farther; superlative, grandfather."

Teacher—Now, what is a sentence?

Bright Pupil—Thirty days, miss.—*Boston Transcript.*

Teacher—Now, Jimmy, give me a sentence containing the word "seldom."

Jimmy—My father used to have a couple of pigs, but he selled 'em.

A teacher said to a boy considered dull in mathematics: "You should be ashamed of yourself. Why, at your age George Washington was a surveyor."

"Yes, sir," was the response, "and at your age he was president of the United States."—*Yonkers Statesman.*

Hints for the Library

What Children Study and Why, by Charles B. Gilbert. Cloth. 337 pages. $1.50. Silver, Burdett and Co., New York. Charles B. Gilbert's book on "What Children Study and Why", is an examination and discussion of the content and method of the course of study in the elementary schools.

No one will gainsay that such an examination is timely in these days when we hear so much of overcrowded courses of study, too highly specialised courses of study, and so on almost ad infinitum.

In this examination Gilbert has done a real service in pointing out—*perhaps reiterating would be nearer the truth*—that the only true basis of solution for both the above problems lies in an examination of child nature, child development, etc. (psychological) on the one hand, and an examination of social structure, social needs, social demands, etc. (sociological) on the other. He points out very clearly that a merely logical examination and solution of these problems can never bring us to the true solution.

He has treated the subjects of the course of study seriatim, and it is not going too far to say that his conclusions, which are nicely summed up in a résumé at the end of each discussion, are in accord with the best pedagogical writers of the day.

It is true that the book has very little new in it for those who have read both extensively and intensively. For example, those who have read such writers as Huey, Clark, Laing, Barry, on the subject of reading will find little of interest in the above book. This is true of practically all the subjects.

But for the public school teacher who wishes to get in a brief compass a perspective of his work as a whole, not only from the standpoint of its motivation but also its vision, the book cannot be too highly recommended.

F. E. C.

Mechanical Drafting, by H. W. Miller, M.E. This is a practical work on drafting, including the different kinds of projection-orthographing, isometric, and oblique—as well as perspective and photographic reproduction. It is the application of the principles of Descriptive Geometry with shop conditions and requirements constantly kept in view—an excellent work for the student who desires a thorough knowledge of the subject. As in the preceding volume on Descriptive Geometry the illustrations and choice of type add much to the effectiveness of the author's descriptions. Leather, 220 pages. $1.50. Manual Arts Press, Peoria, Ill.

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Notes and News.

Mr. R. A. Barron, B.A., formerly Principal of the Iroquois High School, has accepted, at an increased salary, the Principalship of the High School at Port Dover. An interesting feature in connection with this change is the fact that Mr. Barron was Principal in Port Dover twenty-three years ago, holding the position from midsummer 1883 to midsummer 1890.

Miss Isabella Moir, formerly Commercial teacher in Napanee Collegiate Institute, has been appointed to the staff of the Pembroke High School, in the place of Mr. I. D. Bruels, B.A.

Mr. J. L. MacLaurin, B.A., formerly of Upper Canada College, will teach Science in Ridgetown Collegiate Institute this year.

Mr. F. D. Closs of Ridgetown has accepted the appointment of Science Master in Pembroke High School.

Miss S. G. Story, M.A., of Aylmer High School staff, has been appointed to the staff of the Lindsay Collegiate Institute to teach English and History.

Mr. J. M. Swain, and Mr. F. W. Harrison of Treherne, Man., have been appointed to the staff of the High School in Prince Albert, Sask.

Miss A. K. McGregor, formerly of Port Hope High School, will teach English this year in Prince Albert, Sask.

Mr. George Readdie, M.A., a graduate of the Faculty of Education, Toronto, has been appointed to the staff of the Vankleek Hill Collegiate Institute.

The new Central School in Port Hope was formally opened at the beginning of this term. Dr. D. J. Goggin, a former Principal of the Port Hope Schools, represented the Minister of Education at the ceremony.

Mr. W. S. Inman has been appointed Principal of the Kingston Model School.

Miss G. Pratt, B.A., of Dutton High School has been appointed to teach Moderns in the High School at Paris.

Mr. C. W. Robb, M.A., of the class of 1912-13 in the Faculty of Education, Toronto, has been appointed to the staff of the Clinton Collegiate Institute.

Miss Rosa B. Hill of Warkworth Continuation School has been appointed Assistant in the Winchester High School.

Miss Lucille Fraser of Southampton Continuation School has been appointed Principal of the Continuation School in Pakenham.

(*Continued on page 124.*)

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Mr. R. F. Bennett, B.A., of the Class of 1912-13 in the Faculty of Education, Toronto, has received an appointment to the staff of the Guelph Collegiate Institute.

Mr. John C. Doherty, B.A., formerly of Kincardine High School, has been appointed Science Master in Welland High School.

Miss C. A. Pennington of Columbian College, New Westminster, B.C., has received the appointment of Domestic Science teacher in the Stamford High School, Niagara Falls South.

Mr. C. F. Ross, M.A., of the class of 1912-13 in the Faculty of Education, Toronto, has been appointed to the staff of the Seaforth Collegiate Institute.

Mr. H. W. Hall of Lucan has been appointed Science Master in Hagersville High School.

Mr. M. Ferguson of Beaverton has been appointed Principal of Kenmore Continuation School in place of Mr. C. Summers. Miss N. Ferguson succeeds Miss M. Leishman in the Public School.

NOVA SCOTIA

At the closing of the summer session of Rural Science School, in Truro, N.S., twenty-one candidates completed the three years' course, and received diplomas. Nearly sixty obtained Certificates of one year's successful work. This entitles the holders to recommendation for increased government grant.

Dr. Robert Matheson, Provincial Entomologist, Truro, has resigned. He returns to the Entomology department of Cornell University. His place in Nova Scotia will be filled by Mr. Brittain, son of the late Dr. John Brittain. Mr. Brittain is at present Provincial Entomologist for British Columbia.

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"BUT, SIR, IF WANST NOUGHT BE NOTHIN', THEN TWICE NOUGHT MUST BE SOMETHIN', FOR IT'S DOUBLE WHAT WANST NOUGHT IS."

[Reproduced by special permission of Henry Graves & Co., 6 Pall Mall, London.]

The teacher may look back to having given his life to a noble work, and he may be abundantly thankful if he has made a few feeble feet firmer, caused a few timorous natures to be braver and stronger, helped a few boys to resist or conquer grave faults, and ruled a small community with diligence and learning and happiness. He may have an abundant stock of bright memories, tender thoughts, and beautiful experiences; and he will be a very hard and dull person if he is not a little wiser, a little more thrilled with the mysterious wonder of life, a little more conscious of the vast and complex design of the world in which he has been permitted to play a real part.

A. C. Benson in "The Schoolmaster."

The School

"Recti cultus pectora roborant"

Editorial Notes

Bilingualism.—The Bilingual question has again come to the front in Manitoba, Alberta and Ontario. In the more or less violent discussions of the question in Ontario the opinion of the expert is quite overlooked. The financier, or lawyer, or engineer speaks the last word on the problems of finance, law or engineering. But it is not always so with the Schoolmaster. His problems, forsooth, are best solved by the man-in-the-street! Dr. Merchant, one of the ablest administrative officers in the educational service of this country, reported upon the bilingual problem of Ontario. His solution of the problem was accepted, and the present School Regulations give expression to that acceptance. But the discussion that has just broken out afresh overlooks the Merchant report, wrests the problem out of the domain of education, and seeks its solution in the opinions of every man but the Schoolmaster.

The discussions reveal something more than this neglect of the expert. They reveal a failure to recognise the difficulties of the bilingual problem. Many of these difficulties have their origin in history.

There were French and German settlements in Ontario before 1840. So long as each school or school section chose its own text-books and school subjects and was a law unto itself, the bilingual question did not attract public attention. The growth of racial jealousies between the French and English after the Union of Upper and Lower Canada and the rapid extension of the authority of the Department of Education over the individual School under Ryerson's régime provoked the first agitation. The Germans, few in numbers and isolated, practically abandoned bilingualism, but the French, compact in organisation and ever increasing in numbers, won for their language a toleration, if not an open acceptance in the Common Schools of their neighbourhood. In fact the Department of Education of the day authorised the substitution of French for English, where preferred, in the examination of teachers and in 1858 approved a special list of French books for the French Schools. It was impossible to stay the progress of the French Schools in the days of the Union. No political party in Upper Canada could afford to alienate the French of Lower Canada. Even after Confedera-

tion that progress continued apace. In 1874 County Councils were authorised to appoint bilingual inspectors in Counties where there were at least 40 French Schools. In 1879 Mr. Crooks authorised the use of Quebec School books in the French Schools of Ontario. Up to this point the progress of the French Schools towards a dual system of schools had been unceasing. In 1885 Mr. Ross, stirred to action by a very vigorous agitation, took the first steps in restraint. He required the French Schools to use the authorised English Readers side by side with their French Readers. He instructed the inspectors to enforce the teaching of some English in all French Schools and, to aid them, he issued a syllabus of English lessons for French Schools. Moreover, Mr. Ross recognised that the teachers in the French Schools held the key of the situation. They were in the main natives of Quebec, and a few among them who were ambitious and successful soon drifted back to more attractive posts in their native Province. Those who remained in the French Schools of Ontario were not always competent in French studies and were wholly incompetent in English studies. They could not teach English if they wished to. To meet this difficulty Mr. Ross created in 1886 a Bilingual Model School for the training of French-English teachers. The School was not successful. There were no Schools in Ontario which prepared students for admission to its courses and the wretched salaries of teachers in the French Schools of Ontario could not attract a steady movement of educated youths from Quebec. The failure of Mr. Ross's first efforts provoked another agitation in the early 90's. Acting on the report of a Commission of Inquiry, Mr. Ross, issued more specific instructions to his inspectors as to the teaching of English in the French Schools and proceeded to expand his bilingual Model School system. He authorised sets of Bilingual Readers for French Schools and forbade the use of unauthorised or Quebec Readers. He even went so far as to issue a detailed course of study in colloquial English for French Schools. French reading, grammar, and composition must not be taught unless English reading, grammar, and composition were also taught. English alone was to be used by the teacher in the conduct of the classes unless its use was quite impracticable by reason of the pupils' unfamiliarity with it. These efforts arrested the agitation but the French Schools went on as before. The renewal of the agitation under the present educational administration and the efforts to arrest it are well known to all teachers.

This story of the Bilingual School reveals two interesting aspects. Before 1840 each Common School taught French or English or both, as the ratepayers preferred. Between 1840 and 1880 French studies and French text-books were authorised in French Schools by the Department of Education of the day. In 1885 all French Schools were required

for the first time to teach English, it mattered not how little or how much. Between 1885 and 1911 the laws provided various ways of effecting or enforcing the instruction in English but left the amount of English undetermined. In 1911 the law gave English an indisputable supremacy in amount over French in all forms and years above the primary. Between this last stage in the story and the first there is a great gap. That gap is a measure of the hope of those who seek the supremacy of English in the French Schools of Ontario.

The second aspect of the story suggests caution. Despite the rapid growth in authority of the central educational office there is latent in every school section, a belief that the ratepayers, English or French, who maintain a school should determine the work of that school. Custom before 1840 and law before 1885 gave to French parents a vested right to the French language in the Common Schools and in British communities a vested right is rarely destroyed in one year or by one statute. Laws in restraint of the French Schools were difficult of enforcement, in fact, were not enforced even by an administration so powerful as Mr. Mowat's, and the failure to enforce bred in the French ratepayers an indifference towards statutory restraints which must now be reckoned with. At the same time the very rapid increase in the French population of the Province, and the sense of solidarity that has come with the increase, have given additional significance to this indifference.

These two aspects of the story give much reason for hope and some reason for caution.

Willie—"Mamma, I just feel sick all over."
Mother—"Where do you feel the worst?"
Willie—"In school."—*Chicago Record Herald.*

The class had been asked to name the principal occupations of mankind. I saw a troubled expression on the face of one fellow and finally he raised his hand. I went to his seat and he asked, "Where is mankind anyway? I've looked all over two maps and I can't find it."—*Ex.*

"Can any of you tell me why the water in the ocean is salty?" asked the teacher. "I know," answered one little girl. "Ther's codfish in it."—*Ex.*

Any one interested in agriculture might find the following information beneficial. "Three kinds of injurious insects is the potato bug, and the way to get rid of them is to take a pan and paddle and go around and knock them off, then take them to the house and scald them."—*Ex.*

On the Making of Lesson Plans

PETER SANDIFORD, M.Sc., PH.D.
Faculty of Education, University of Toronto

WHEN man changed from a hunting to an agricultural mode of life an enormous stride was made in the evolution of civilisation. This advance was principally due to two causes: (1) The necessity of studying a problem through, or plotting and planning in the present for a result to be obtained in the future; and (2) the introduction of the idea of postponed payments or deferred rewards. These two principles, the projection of the present into the future and the curbing of the desire for immediate results, together with the ability to profit by experience, lie at the basis of all human progress.

These principles are at work in every field of human endeavour. Aforetime, a business man to be successful, did not need to look ahead for more than a year or so. At the present time such a short-sighted policy would be almost sure to spell ruin. In politics, also, the projection into the future is carried to an enormous extent. The Panama Canal and the Cape to Cairo Railway are not being built for 1914, or 1920, but for the prosperity of two nations concerned fifty or a hundred years hence. So also in education. The teacher who can think through a problem, who can see ahead, is far more likely to be a success than a teacher without such ability. This planning may be done in the head and never committed to writing, yet in many cases, as in the training colleges for teachers and in some schemes for the supervision of teachers in service, the exigencies of the situation demand the writing up of the lesson plans. Before discussing the question of what can be expected of teachers and student-teachers in the way of lesson plans a survey of existing practice will be made. The weaknesses of present day lesson plans are shown by the following:

(1) The plan making practice of the training college seldom functions in the after life of the teacher. Plans prepared in the training college, instead of simply being of the same type, only more detailed, as those prepared in the public elementary school, seem to be built on a highly specialised plan which is found to be absolutely unworkable under the stress and strain of schoolroom routine. Only the brighter teachers have been able to bridge the gap between the artificiality of practice school plans and the hard reality of schoolroom procedure. Yet it is difficult to see why the schoolroom should not have its plans in outline form only, while the training college has these same outlines elaborated to any extent it deems necessary.

(2) Published plans have, for the most part, been for the developmental type of lesson. This is probably due to the fact that the developmental type is by far the easiest for which to prepare plans. Nevertheless, such plans have done serious harm. The danger from ease of organisation is not the gravest of the charges to be laid at the door of the developmental type of lesson. A far more serious criticism is the fact that printed lesson plans have all been built on this model. This, in spite of the fact that only one-tenth, or thereabouts, of actual schoolroom work is of the developmental kind. The five step lesson of the Herbartians is the best of the known plans for the developmental type of lesson, yet the excellencies of the scheme have been overshadowed by its limitations. The five formal steps were worked to excess and "Herbartianism run mad" was seen when music, writing and gymnastic lessons were planned on the Herbartian steps.

(3) Another great weakness in lesson plans of the past was the overemphasis of what may be termed the question and answer method. The whole of the development of the lesson consisted of a long string of minor questions, many of which were fictitious for they were never asked in the actual teaching of the lesson. Questions introducing new topics can, and should be specifically prepared for; the incidental questions to which the leading ones give rise are more dependent upon the course taken by the lesson. A sound analysis of the problem will generally provide the teacher with appropriate questions when the time for teaching arrives.

(4) Few writers have realised to the full the fact that there is no such thing as a pure type of lesson. A developmental lesson, although largely developmental, is not wholly so, for it contains elements of all other types of lessons. Nor has the significance of the fact that the greater proportion of schooltime is devoted to the acquisition of skills, or dexterities, or muscular adjustments and not the learning of facts, been adequately realised. Why should we not have lesson plans for the skills of the schoolroom as well as for the facts which are there learned? The inherent difficulties are great but the researches of Bryan and Harter, of Thorndike and of Swift point to the possibility of arranging for skill lessons whose aim is to enable the pupil to rise from one "plateau" to another. Former attempts to arrange skill "topics" led to continuous practice upon such comminuted elements as pot-hooks and ladles in writing, and straight lines, horizontal and vertical, in drawing. Why cannot we have a lesson plan on such a topic as "the use of a dictionary" in which a series of exercises, arranged to give a facility in dictionary usage, is outlined in logical fashion?

(5) But perhaps the greatest weakness of all lesson planning has been the failure to divide up the work into sections or topics. The

daily lesson plan, except as an elaborated part of a larger whole, belongs, in pedagogy, to the hunting and fishing stage of civilisation.* Nor are chronological divisions in history or minute regional divisions in geography the best divisions that can be made. The subject must be seen in its entirety before it can be subdivided satisfactorily.

What features then are common to lesson plans of all types? To the writer the following seem to be the essentials:

(*a*) The division of the subject matter into "topics" or "sections" or "method units". A topic may be compared with a chapter in a book. The field covered by the topic depends upon the amount of time that can be devoted to it. Thus "Canada" as a topic would be fitting if the geography of the world were the subject, but if Canada alone were studied for a year such topics as "Wheat raising", "Lumbering", etc., would be entirely in order. In the case of lessons dealing with the acquirement of skills the subdivision of the work is more difficult. Usually such subdivision has been according to the subject matter or knowledge standard. But there is no doubt that much can be done by arranging the work according to the skill or dexterity standard. A topic in the arts may be tentatively defined as an arrangement of new conditions of practice which will enable a child to raise himself to the next higher plateau level. This does not neglect the great factor in habit formation, viz., that a new habit may be learned while a more elementary habit on which it depends is being perfected. Such a subject as reading which has knowledge and aesthetic as well as skill elements, could be arranged first on one plan, then on another according to the needs of the pupils in the class. The only essential features of a topic are that it should possess a real, not a fictitious unity, and that it should be large enough to cover several lesson periods, say from three to ten.

(*b*) The topic having been selected the next thing for the teacher to do is to seek or suitable illustrations, apparatus, references, etc., bearing upon the topic. References for the children as well as for the teacher should be kept.

(*c*) A careful analysis of the topic is next made. The form of the analysis is dependent, of course, upon the teacher's aims or purposes. But an analysis is not an essay. It is a logical division and subdivision into heads and sub-heads.

(*d*) The lesson plan proper can now be made. On the left hand side the subject matter can be placed; on the right the method of teaching or procedure can be given. The "What" the teacher is going to do on the left side—the "How" the teacher is going to do it on the right.

* Unfortunately the short time at the disposal of the trainers of teachers in the two Ontario Universities precludes any teaching practice other than that of single lessons. In course of time continuous practice will probably be given.

This parallel column method is suitable to any type of lesson. Care must be taken to keep the paragraphs in alignment, but any degree of elaboration is possible. The procedure column is a careful forecast of the method of the lesson—of what the teacher actually proposes to do. If the teacher intends the scholars to read from page 21 to 28 of such and such a text, it ought to be recorded. If the teacher can frame half a dozen leading questions she intends to ask so much the better. In all cases, however, the "How" column ought to be a real forecast and not something to pass muster with the critic teacher or supervisor.

The lesson plan will run as follows:

I. Topic.....Grade.....

II. Teacher's aims or purposes.

III. References, illustrations, apparatus, etc.

(*a*) for use of teacher;

(*b*) for use of scholars.

Note—The references for scholars are indicated in procedure column in their proper places. The writer thinks it useful to collect them together as above.

IV. What it is proposed to do.	How it is proposed to do it.
In this column a careful analysis of "Matter" shown with paragraphs in correct sequence thus: 1 a b 1) a) 2 a 1) b a) etc.	In this column a more elaborate statement of the "Method" is given. Care should be taken to see that the topic begins easily, that references are indicated, that alignment is correct, that children's aims are brought out, that summaries, drills, leading questions, assignments, etc., are given in their proper places.

A lesson plan of the above type has the following valuable features: it gives the essentials in bold relief; it is applicable to all cases in all places; and it can be elaborated to any extent deemed necessary.

The teacher had written several words on the board, all of which are promptly given by Harold, the small beginner, who hesitates on "rat". Teacher coaxingly says, "Now, Harold, I want you to tell me what that word is." Harold thinks a while, then says, "Don't you know?"—*Ex.*

In a geography class, the teacher asked how water-birds catch fish. One little girl replied, "They take a fish pole in their claws, throw the line in the water and get them on a hook."—*Ex.*

How to Improve our Rural Schools

J. H. SMITH, I.P.S.
Inspector of Schools, Wentworth County

[A paper read before the Inspectors' Convention at Guelph, in August.]

TO-DAY I purpose dealing with ideals rather than with cold hard facts, and shall seek to extract from them some thoughts that may prove of practical value. Should I fail in this, I have no doubt some one among those present will discover the missing link that binds the ideal to the real, and thus aid in the solution of some of the problems surrounding our rural schools. Should these problems wholly or partially be solved, as they of necessity must be, then we shall have made the nearest approach to an ideal education that the world has yet seen, and one that will ring true to the ideal and embody the real.

The first ideal with which I shall deal is that of Education. Well do I know that it may mean almost anything because it is always more or less coloured by the personality of the writer or speaker. Definition after definition has been given to the word Education, and yet we have very imperfect ideas as to the real force and meaning of this word. Our standards of judgment vary so much that scarcely any two will agree as to what is a fairly accurate definition. I shall not attempt to define it, but shall content myself with simply outlining in a general way my conception of it. Whether I shall make my meaning clear to each one of you will depend partly upon your mental attitude, and partly upon my ability to convey to you my own impressions of it. To make my meaning clear, I shall fall back upon Robert Browning where he speaks of man as being composed of the "What Does", the "What Knows" and the "What is". By the "What Does" I understand him to mean the physical man with all parts of the body fully developed and trained to usefulness; by the "What Knows", the mind properly equipped, where the judgment and the understanding do their part, and where the memory is so trained that it furnishes the mental food that nourishes the mind and aids in developing and strengthening the whole intellectual man: and by the "What Is", the growth and activity of the Spiritual Sense. Now this Spiritual Sense is that part of our nature that controls both the physical and mental, and fills them with an intellectual aroma that rises from the thought just as the fragrance rises from the lips of flowers.

Just here permit me to make a slight digression and say that in my opinion our present methods lay too much stress upon the mere acquisition of knowledge and not enough upon the proper development of

the child. I would therefore with becoming modesty suggest that the "3 R's" be relegated to their proper place, and that the "3 H's" be promoted to fill the vacancy. By the "3 H's" I mean the education of the hand to work, of the head to plan and contrive, and of the heart to govern and control. Then we shall begin to develop the highest type of manhood and womanhood.

My second ideal is the pupil. The ideal pupil is one whose environment from his earliest infancy has been such as to develop in him his best physical, mental and spiritual powers, one who has been taught obedience and respect for authority, one who has been trained to work and feel proud of it, and one whose home is the embodiment of neatness and order and is filled with an atmosphere of culture and refinement. These homes are not necessarily found in the realms of luxury, nor in the haunts of poverty, but in that realm where neither poverty nor riches is the dominant spirit. Such homes are by no means common, but it is our privilege to throw the weight of our influence on the side of the ideal home.

My third ideal is that of a properly balanced Course of Study. I am well aware that this is a very difficult problem to solve, and I shall therefore not attempt a solution but will simply give a concise outline of its principal features as they appear to me. First in importance and utility I shall place English, embracing reading both oral and written, grammar and composition; Second, mathematics embracing a thorough knowledge of the fundamental operations of calculation and a minimum of problems, with these limited to the more advanced classes; Third, the study of form, embracing the form of the letter, or writing, the form of the word or spelling, and the form of the object or drawing and Art; and, Fourth, the study of the earth as the abode of man. Under this last division I should give a broad outline of the natural and political divisions of the earth, a somewhat general sketch of physical and mathematical geography, nature study largely as an introduction to the more advanced study of agriculture, history or the study of man in his relation to the state, and lastly hygiene on the proper care of man as an animal.

In the study of English I should make oral reading the essential feature. This will of necessity involve word recognition, phrase recognition, thought recognition and expression. The simple sentence is usually considered as the unit of thought and I should teach it as such from the very first. I am strongly of the opinion that if more stories were told or read to the pupils during the first term or even the first year at school the pupils would have not only a greater enlarged vocabulary but would be able to speak both fluently and accurately. The habit of correct speech should be formed early in life and no better place can

be found to form this habit than the primary departments of our Public Schools, and no better instrumentalities than stories and story telling. The ear avenue should be utilised first, and afterward, the eye avenue. At the present time, in far too many cases, we cram words but do not teach reading. If I have a correct conception of what reading really is, I should define it to be, "the correct interpretation of the thought and spirit of any literary selection". Nothing but persistent practice under a competent teacher can make good oral reading a practical possibility.

In grammar the simple sentence should be taught analytically, from the thought point of view, while in composition this process should be reversed and the synthetic method adopted. If reading has been so taught that the pupil is able to extract at sight the thought from the printed page, both grammar and composition will present few if any real difficulties. The essential element here as in oral reading is well directed practice. We cover too much ground and teach too many technicalities. These technicalities divert the mind from the thought, and in too many cases dull the edge of the intellect, and discourage the pupil. The Great Teacher has said, "If a son shall ask bread of any of you that is a father, will he give him a stone? Or if he ask an egg will he offer him a scorpion?" The pupils ask for the bread of thought, and we give them the stone of definition; they ask for the egg of knowledge and we give them the scorpion of examination. The sting of the scorpion is failure, and the strength of the examination is cram.

My purpose in commenting at such length on the present curriculum is to show wherein we may profitably cut out many things that are not only beyond the mental grasp of the pupil, but are in reality nothing more than useless material stowed away in the memory. There is altogether too much of this waste of mental effort. For example, take grammar or spelling or geography or even arithmetic, and see what an amount of strain is put upon the pupil in acquiring what is in reality a hindrance and not a benefit. One has only to scan carefully the spelling book, or thoughtfully read the pages of our grammars to see what a quantity of useless material is stowed within these pages. Fully 50% of the material in these books could be eliminated and the pupils would not suffer from the loss. Then if the balance were judiciously arranged and more thoroughly taught our young people would have a better knowledge of how to use English and a clearer conception of its real value. Further the pruning knife could be used to advantage in both the geography and arithmetic. It is not the quantity that is required, it is the quality, for it is better to have the ability to use one thought well, than to have committed to memory a whole mass of words, that are as useless to the pupil as the fifth wheel to a waggon. If therefore fully one-third of our arithmetics and our geographies were struck out,

this pruning would add greatly to the efficiency of the instruction given. We could then substitute some facts from the immediate environment of the child, and enlarge his store of useful knowledge, without depriving him of one iota of valuable material for mental development. It would only be a judicious selection. If a body of water were confined to a flume two feet wide and one foot deep we should have power to drive machinery, but if this same quantity were distributed over a surface say of 24 feet, we should lose the power, and have simply a bed of mud substituted for it. So it is in our schools. We gain power in concentrating our efforts, and we lose it if we attempt to cover too much ground. Many of the details given are too minute and tend to confuse the child rather than enlighten him. We go too minutely into detail and defeat the very object we seek to reach. Let us then endeavour to give carefully selected outlines rather than detail, and let the details be supplied by reading on the part of pupils in future years. We are trying to fit the mental dress of grown people on our boys and girls, instead of fitting them as boys and girls. We are giving them or rather cramming them with what it has taken possibly years for us to realise. Let us put boy's clothes on boys, and girl's clothes on girls, intellectually as well as physically, and let them grow up as nature has intended them into men and women.

Now I shall devote some time to my fourth ideal, the ideal School, or the ideal system of County Schools. I shall not attempt to give you an imaginary picture, but shall simply outline in a general way my idea of a County system for rural districts which shall be in close touch with the home life of the farm. For this purpose I should place all the Public Schools of a County under the direct control of a County Board of Education, acting under the authority of the Provincial Statutes and the regulations of the Education Department. The Department would then control the general policy for the Province, and the Boards of Education would administer this policy in the County units.

The present system of section Boards of Trustees has outgrown its usefulness, and it now remains for us to formulate some scheme whereby we can retain all the useful features of the section system, and embody with them new features that our experience has shown to be both necessary and useful in the proper education of the rural population.

The time is now ripe for the introduction of some changes in the administration of our Public Schools. The present system of rural sections is altogether too democratic, and should have an admixture of despotism or the concentration of power in some corporate body that will command the attention and respect of the great body politic. Our best efforts for the improvement of our schools are too frequently thwarted by the action of the ratepayers. Local self-interest is too

frequently the dominating power in determining what changes shall be made. Some of the advantages of a County Board of Education may be briefly summarised as follows: (1) A uniform rate of taxation over the County; (2) advanced schools placed where most needed; (3) better class of teachers employed; (4) permanency of teachers' positions greatly improved; (5) better buildings and grounds; (6) better division of work in schoolroom; (7) suitable provision provided for advanced work; (8) special winter classes for those unable to attend the whole year; (9) manual training, domestic science and commercial work could then be introduced; and (10) our schools could then be made the social and intellectual centres for the various neighbourhoods.

I should retain the present section schools as primary schools and group them into districts for consolidated Continuation Classes. In these districts there should be not less than four sections, unless the population is very large. The school most centrally situated and easiest of access should have at least three rooms, one for the primary classes as in other sections, one for Continuation Class work, and a properly equipped and sufficiently large science room for the use of the Continuation Classes and for instruction to the farmers and their families in some department of Agricultural Science. Professors from the O.A.C. could then give short courses in such departments as would meet the requirements of the people of that district. From these classes pupils could matriculate into the O.A.C. and these schools would then become feeders to this College and a very important factor in the dissemination of agricultural knowledge.

To sum up briefly, I may say: (1) that some workable scheme for County Boards of Education be devised; (2) that the present section system be utilised for primary work; (3) that four or more of these sections be grouped into and form one consolidated School district with suitable provision for advanced classes; (4) that accommodation be provided for winter classes; (5) that a science room properly equipped and of sufficient size be provided for the instruction of farmers in agriculture, and for the use of the advanced classes. (This room may also be used for special meetings.) (6) That a course of study suitable for the requirements of our rural schools be framed; (7) that pupils be prepared for matriculation into the O.A.C.

In conclusion I would direct your attention to the study of the spirit of the present age, for we are on the eve of some important changes in our educational work, difficult to define yet steadily advancing. Recently I have read an address delivered by Mr. H. G. Wells before the Royal Institution wherein he gives the following forecast:

"There are many things to suggest that we are now in a phase of rapid and unprecedented development. The conditions under which

men live are changing with an ever-increasing rapidity, and, so far as our knowledge goes, no sort of creatures have ever lived under changing conditions without undergoing the profoundest changes themselves. In the past century there was more change in the conditions of the human life than there had been in the previous thousand years. A hundred years ago inventors and investigators were rare scattered men, and now invention and inquiry are the work of an unorganised army. This century will see changes that will dwarf those of the nineteenth century, as those of the nineteenth dwarf those of the eighteenth. One can see no sign anywhere that this rush of change will be over presently, that the positivist dream of a social reconstruction and of a new static culture phase will ever be realised. Human society never has been quite static, and it will presently cease to attempt to be static."

Everything seems pointing to the belief that we are entering upon a progress that will go on, with an ever-widening and ever more confident stride, forever. The reorganisation of society that is going on now beneath the traditional appearance of things is a kinetic reorganisation. We are getting into marching order. We have struck our camp forever and we are out upon the roads.

We are in the beginning of the greatest change that humanity has ever undergone. There is no shock, no epoch-making incident—but then there is no shock at a cloudy daybreak. At no point can we say, "Here it commences, now; last minute was night and this is morning". But insensibly we are in the day. If we care to look, we can foresee growing knowledge, growing order, and presently a deliberate improvement of the blood and character of the race. And what we can see and imagine gives us a measure and gives us a faith for what surpasses the imagination.

It is possible to believe that all the past is but the beginning of a beginning, and that all that is and has been is but the twilight of the dawn. It is possible to believe that all that the human mind has ever accomplished is but the dream before the awakening. We cannot see, there is no need for us to see, what this world will be like when the day has fully come. We are creatures of the twilight. But it is out of our race and lineage that minds will spring, that will reach back to us in our littleness to know us better than we know ourselves, and that will reach forward fearlessly to comprehend this future that defeats our eyes.

All this world is heavy with the promise of greater things, and a day will come, one day in the unending succession of days, when beings, who are now latent in our thoughts and hidden in our loins, shall stand upon this earth as one stands upon a footstool, and shall laugh and reach out their hands amid the stars."

Combined Physical and Chemical Laboratory

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IN the October number of THE SCHOOL a laboratory bench suitable for a combined physical and chemical laboratory was described. I wish to complete the description by stating the arrangement of the benches and other furniture in such a laboratory.

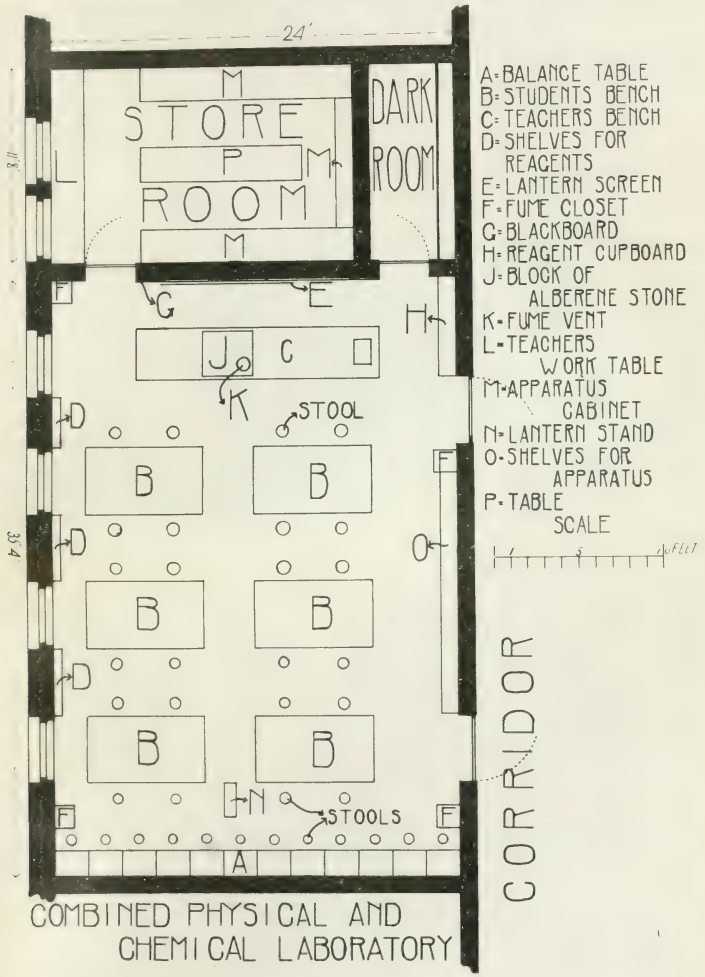
Before doing so there are some general observations in regard to the position, construction, and lighting of the science room to be made. The laboratory should be somewhat isolated. It is better to place it in a corner room or at the end of a wing or hall than to locate it among the classrooms. There is always a good deal of noise in the laboratory due to grinding rocks, ringing electric bells, etc. As the pupils are not seated at desks but standing before benches, and moving about, this will add to the disturbance which will tend to distract pupils at lessons in adjoining rooms. The irritating and ill-smelling odours of the Chemistry class will also prove a disturbing factor in adjoining rooms into which they are sure to penetrate.

The room should be as free as possible from vibration and also away from large masses of iron as these will prove a disturbing factor in electrical and magnetic experiments; hence it should be well away from the boiler room or any engine used for running a fan.

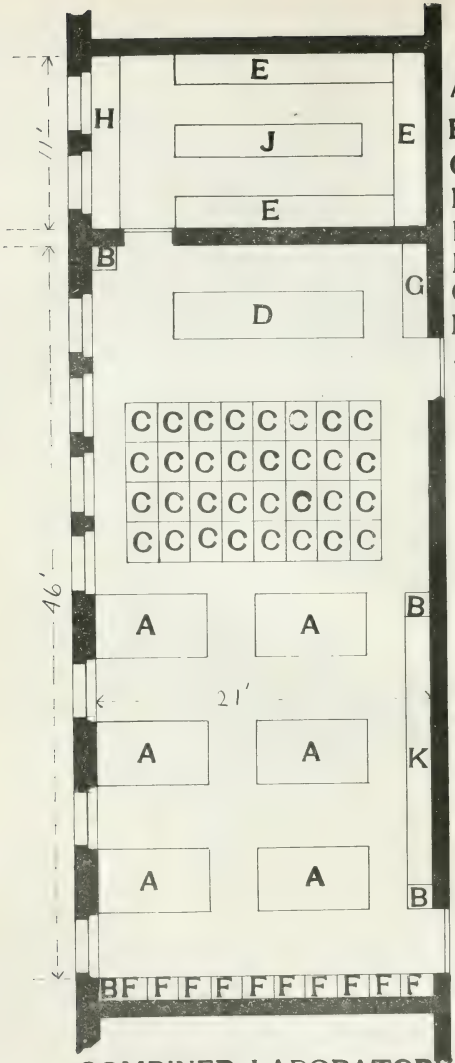
The ground floor is too busy and public and does not give the proper isolation. It makes the laboratory too handy for visits from the curious, who are likely to be meddlesome if not thieving. Sometimes the laboratory is thrust into the basement. There is certainly no part of the building less suitable. The accurate observation of delicately graduated machines requires the brightest illumination instead of the gloom of these subterranean quarters. The summer dampness of such a place is bound to rust the iron and warp the wood of the delicate physical apparatus, and soon will make them useless. Altogether the top flat has much to recommend it. There is suitable isolation, and the noises and noxious fumes will cause less disturbance than elsewhere. Of course there are certain objections to this position; the water and gas have to be piped further, and an accidental flooding from one of the taps may do an immense amount of damage.

The lighting of the laboratory is an important consideration. It would be difficult to find an example of a laboratory too brilliantly lighted, but the number that are too dimly illuminated is altogether too numerous. The delicacy of observation required demands the greatest

brightness possible in the parts farthest from the windows. The ideal illumination is that from a large skylight, and there is no reason why labora-

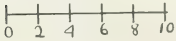


tories situated on the top story should not have such an arrangement. It eliminates disturbing shadows, makes the illumination uniform in



A STUDENT'S BENCH
B FUME CLOSET
C STUDENT'S SEAT
D TEACHER'S BENCH
E APPARATUS CUPBOARD
F BALANCE TABLE
G REAGENT CUPBOARD
H WORK BENCH
J TABLE
K SHELVES FOR STUDENTS' APPARATUS

COMBINED LABORATORY
AND
LECTURE ROOM



all parts and allows more wall space to be retained for black-boards and shelves. Of course if skylights are present, it would not be wise to abolish all the side lights. Without these it would have too much of the feeling and gloom of a prison about it. The side windows are necessary also for a quick changing of the air, when the latter becomes contaminated.

When lighted by wall windows a southern aspect has much to recommend it. The illumination is stronger, more even throughout the day, and is handier for experimental purposes, where direct sunlight is frequently required.

The amount of window space can scarcely be too large. For an ordinary class-room school architects recommend that the lighting area should be not less than from one-sixth to one-fourth of the floor space. In a laboratory this should certainly be at least one-fourth.

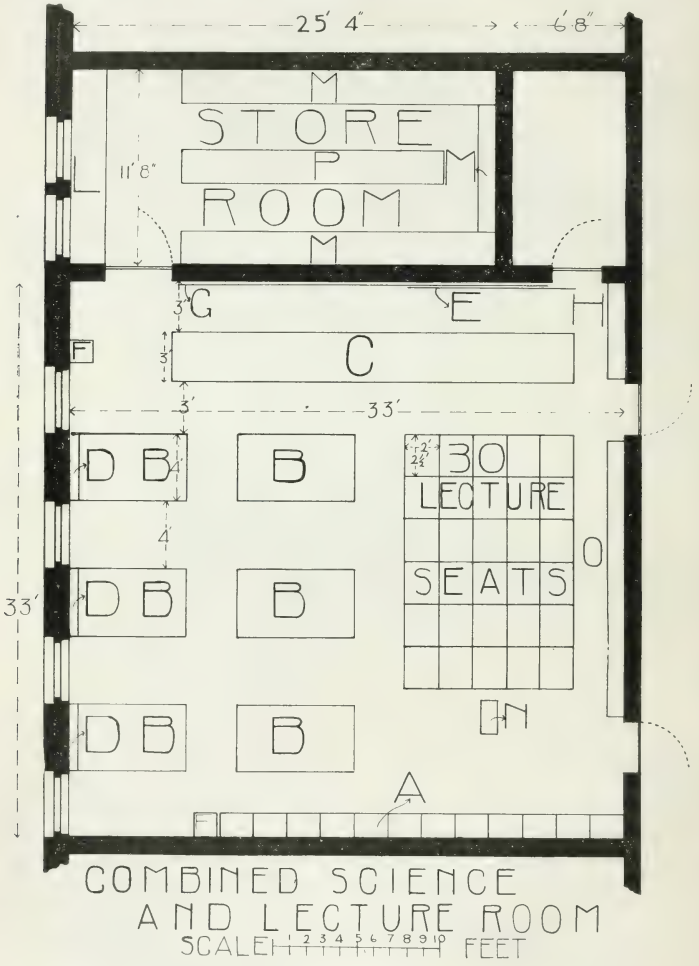
If the laboratory be 30 feet long 24 feet wide, the area of the floor space is 720 square feet; the area of effective window space is, therefore, 180 square feet; adding 20 square feet occupied by the sash and the partitions between the glasses, the total window area should be 200 square feet. If the ceiling be 14 feet high and the windows begin $3\frac{1}{2}$ feet from the floor and go to within 6 inches of the ceiling (as they should), then five windows each four feet wide would give just the required light area. Where the room is wider the proportions of four to one should be diminished.

The laboratory should be of such a size that the tables can be placed in the most convenient positions and yet give adequate aisles for the students and sufficient room for the teacher to move among them to assist in the work. It should also have accommodation for a lantern stand, fume closets and some shelves for reagents, also shelves for storing the sets of pupils' apparatus. There must be at least one additional apartment to serve as a store-room, and a small dark room will be found valuable but is not absolutely necessary.

The light may come from almost any direction, but south windows have certain advantages. Very frequently the sun's light is required for experimental work in optics and also occasionally for projection, and southern windows give light for almost the whole school day. Observations in geography on the motion of the sun and on shadows can also best be performed with south windows. Of course light from skylights give an even distribution to all parts of the room but it can only be occasionally secured.

The desks should be placed with their ends directly in front of the windows as shown in figure 1. This secures good side light for all the working places. The teacher's demonstration table *C* is also placed opposite a window, so that a porte lumiere placed in the window will

throw light directly across the table. Of course it is possible to have a hole drilled in the wall and a porte lumiere placed in this opening.



Every science room should be equipped with a projection lantern, and the stand (*N*) for it can be placed at the back in the aisle between

the rows of desks. An opaque shade (*E*) on a spring roller is placed above the blackboard.

Even in a school with a single laboratory provision should be made for balance tables as these require a firm horizontal base to rest upon, and are usually injured by being carried to the pupils' desks, and certainly are injured by the corroding gases discharged into the room during experimental work in chemistry. These tables are best placed against the wall and should be fixed to it by brackets having no attachment to the floor, as they must be free from all jarring.

While a few of the most generally used chemicals will be kept on the reagent shelves in the pupils' tables it is convenient to have other shelves at accessible places around the room on which other commonly used chemicals can be kept, and also larger quantities of the reagents used in the students' bottles, from which the supply can be replenished. These may well be placed on the wall between the windows (*D*) in tiers of two or three shelves. The bottoms of these shelves should be made of plate glass slate, or if of wood it should be well protected by an acid proof finish. One large reagent cabinet (*H*) should be placed near the teacher's desk, in which all the reagents, both solid and in solution, should be kept.

Fume closets (*F*) are placed at the four corners of the laboratory, one being convenient for the teacher, the others close to the students' places. These need not be of large size but must have a strong artificial draft preferably by a motor fan.

The store room is a necessity in such a laboratory as physical apparatus would be soon ruined if kept in a laboratory where chemical experiments are being performed. The store room has apparatus cabinets (*M*) around the interior walls.

A table (*P*) down the middle is very handy for setting up apparatus and for laying pieces preparatory to putting them in the cabinets. A work bench (*L*) may well be placed along the outer wall just below the windows; this should have a sink and should be fitted also for working in wood, iron and glass.

Figures 2 and 3 show plans of two science rooms of larger size than illustrated in figure 1. These combine the laboratory with the lecture room. This arrangement is one that should be aimed at even in small schools, for the additional space and equipment required are insignificant while the convenience and effectiveness of the work are greatly increased.

It is difficult for a teacher to teach a lesson or demonstrate an experiment to a class distributed over a large room seated uncomfortably at science benches, half of them facing the back of the room. A set of seats compactly placed together, located near the demonstration table gives

a much more favourable condition. All the students can observe clearly any experiment or explanation on the black-board and the teacher can have his class under much closer observation, and discipline becomes much easier.

The letters in figure 2 have the same significance as those in figure 1. Figure 2 shows the arrangement in a square room and figure 3 in a long narrow room. The general arrangement in both is similar to that of figure 1 and calls for no additional comment. The position of the lecture seats in figure 3 is superior to that in figure 2 as the light is much better. In both cases there is no gangway next the windows, as it becomes necessary to bring the benches up against the wall between the windows. Altogether there is much to be said in favour of the long narrow room for laboratory purposes.

Suggestions for the Class-room

The Teacher in Social Life.—Every community is waiting for the teacher who has some contribution to make to its social life. Too often the attitude of the teacher is fundamentally wrong. She is content to be only a pensioner on the social and intellectual bounty of the community. She who studies to make the most of herself in mind, manner, and heart, fit for the companionship of the choice spirits in every community, will never complain of a caste system that excludes the teacher from the normal social life that is the birthright of all women.—Lora Levens in *School Education*.

Joy.—Joy is the great tonic of the nervous system and it is nowhere more serviceable to humanity than in the school. A schoolroom where genuine joy abounds is physically, mentally, and morally healthy.—*Selected*.

The teacher's joy is to touch and conquer souls, and this is the one prize which can bring us a true compensation.—*Maria Montessori*.

Experiment.—Here is something I have tried during several spring months.

Fill a glass with water and cover with cotton. Upon this cotton place several kernels of corn, a few peas and beans. Then place in a warm sunny window. Add a little fresh water every day, but do not disturb seeds of cotton.

In a short time the roots will go down through the cotton and the leaves upward. The children take great interest in this because they can see just how much improvement is made each day.

The peas had blossoms and pods on them before school closed. The pods were just as strong and healthy as those produced in soil.—Alma A. Ballig in *School Education*.

Little Journeys to Rural Schools

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III.

MISS THORNE, the teacher of the Somerset School, had been born and bred on a prosperous fa m. Her brother had taken the agricultural course, and the whole family were enthusiastic over the attractions of farming and the unequalled pleasures of country life. Miss Thorne believed it was the highest function of the rural teacher to develop that sentiment in the minds and hearts of the children. She knew that such a sentiment cannot be developed from books or from classroom lectures —no matter how impressive such lectures may be. She had observed that we learn the most effective and beneficial lessons from pleasurable activity and from those forms of self-expression to which we devote the most earnest attention and enthusiasm.

During the winter months she had outlined her plans for the spring; and, as those plans became definitely determined in her own mind, she announced them, at appropriate times, to her pupils, whose interest became more eager as spring approached. The pupils were encouraged to offer suggestions, so that in the end, they looked upon the whole scheme as a mutual one—designed by the teacher and themselves.

Leaders in business who achieve the highest success, work in co-operation with their employees; and the more the employees are led to feel that the executive method is partly of their own devising the more cheerfully they conform to its requirements, the greater their faithfulness and industry, and the more intense the pleasure they find in their work. The same principle applies in the management of a school.

The land adjoining the Somerset School was not suited to the making of a garden, so Miss Thorne encouraged the pupils to make little gardens at their own homes; and she promised that in June she would visit each garden, at least once a week, to inspect the results of their work. That promise greatly stimulated the interest—especially owing to the fact that her approval was viewed by the pupils as a reward well worth striving for.

Twice a week in May and June there was a period set apart for a "garden lesson". This lesson took the form of an oral discussion by the pupils, who told of their experiments and the results they had achieved. On Friday afternoons they wrote an account of their gardening experiences for the week and any other work that they had done at home. The following is an example of one of the exercises written by a pupil of 14 years of age:

"On Monday I dug and raked a piece of ground 20 feet long and 10 feet wide. On Tuesday I planted beans on this land and covered the beans 2 inches deep. On Wednesday it rained, so I could not work. On Thursday I took up one bean and found that it had swollen just a little. Then I helped my father spray the orchard and he gave me 10 cents. I put that in my little bank. When I get a dollar I will put it in the Savings Bank. I have $7.00 that I earned myself."

On the occasion of my visit to the school, the teacher was telling the children that Bertie Watson and Mary Brennan had the best gardens that she had observed that week; but that she had not yet completed her weekly round of visits. For the visitor's benefit, Mary and Bertie were asked to tell how they had secured such good results. If every rural teacher could hear these children talk, and catch some measure of their enthusiasm, the interest in this important work would be increased far more than is possible by other means.

The two pupils had something definite to relate—something in which they were intensely interested—and their interest was shared by the other pupils, the teacher and the visitor. To be engaged in interesting and useful work, and at the same time to be learning the faculty of correct oral and written expression regarding matters of general interest represents one of the very best methods of education that can possibly be devised.

Primary Arithmetic Lesson

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Notation 99-110.

The Aim of the Lesson.—To broaden the pupils' knowledge of number by acquiring a new denomination, emphasising the rotation and relation of number, prominence being given to the basis of number.

The Lesson in Outline.—

(1) Review of numbers from 1-99. Tests of the pupils' comprehension of the terms "tens" and "units", of the value of figures consequent upon their places in a given number.

(2) By means of concrete illustration to give an adequate and forceful perception of the new symbol 100.

(3) The naming of the new denomination and the symbol developed and used.

(4) The objective teaching of 101, 102, 103, followed by the symbols and names of those numbers.

(5) By analogy to deduce the symbols and names of the numbers 104-109.

(6) By means of illustration to develop the symbol 110 and to assign its name.

(7) The new figure characters in use.

The Lesson in Practice.

I. Preliminary Tests of Present Knowledge.

(*a*) *Q.* "What number is made up of six tens and four units?" *A.* "64." Etc.

(*b*) *Q.* "Of what is the number 89 made up?" *A.* "Of eight tens and 9 units." Etc.

(*c*) "Find me from our box of money 36 cents, or 42 cents, or 71 cents." (Some pupil is chosen to perform the act.) Etc.

(*d*) *Q.* "How much money am I putting into my purse?" Teacher shews 9 ten cent pieces and 7 coppers. *A.* "97." Recorded on slates and corrected.

(*e*) *Q.* "Find me the number 28 in slats." *A.* Pupil picks out 2 bundles of 10 and 8 units.

(*f*) *Q.* "Of what number am I shewing you a picture?" Teacher shows 5 bundles of 10 and 2 single slats. *A.* "52." Recorded on slates and corrected. Etc.

II. The Emphatic Perception of 100.—Call up two children, preferably a girl and a boy, to the front. Arrange them to face the class, the girl being on the right hand of class and the boy on the left. Pupils will name these as characters—Mr. Tens and Miss Units. The names (or rather initials representing them) are put on the blackboard by the teacher and by the pupils on central top of slate. Require the numbers 98 and 99 to be put in proper relation to these names both on the blackboard and on the pupils' slates. The blackboard sketch thus far shows:

T. U.
9 8
9 9

The teacher produces the box of slats and asks a pupil to give 99 slats to the children up in the front. The pupil picks out 9 tens and 9 units and gives them to the children in front. The teacher takes up a new slat or unit and remarks that to-day the class is continuing the number work and asks to whom the new single slat is to be given. *A.* "As it is a unit Miss Units should receive it."

Q. "But how many has Miss Units already in hand?" *A.* "9."

Q. "Is it possible for Miss Units to hold the new one?" *A.* "No, her nine and the new one must make a fresh bundle of 10."

Teacher takes the 9 units from the girl, adds the new slat, fastens the whole by an elastic band into a bundle (or a 10).

Q. "What am I to do with this ten?" *A.* "Give it to Mr. Tens."

Q. "But how many has Mr. Tens"? *A.* "9."

Q. "Can he hold any more?" *A.* "No, because 9 is all any one child can hold."

Q. "Well, what can be done about this?" Usually some bright pupil decides that the ten bundles (or tens) must be fastened together into a new large bundle, and a third child be brought forward to hold the fresh package and be called a new name. Should no child volunteer the correct solution of the difficulty the teacher must remind the class in some such way as the following:

"You remember the story I told you when we learned to make 10—how when long ago people were first making figures, it was decided when any person held nine of any object it was as much as he was to be allowed to do; he could hold 1, or 6, or 8, etc., but never more than 9. It was arranged to have the units or objects fastened together when another unit came along. So we tied up our 9 old ones along with the new one and the bundle was held by an entirely different person from the one who grasped the units. This person was named Mr. Tens."

Q. "*Now* what do you think we might do with all this array of tens?" *A.* "Why fasten the nine tens Mr. Tens has and the one still held in teacher's hand into one big bundle, find some one else to hold it and give that person a new name."

Thus a fresh denomination (hundred) is brought into view; a new girl is selected to hold the recently formed bundle after the teacher has performed the change of 10 tens into a bundle of 100.

III. The Naming and Use of the new Denomination.—The teacher tells that the new girl has the name Miss Hundred and places H. before the T. U. in the blackboard sketch, and requires the pupils to put that letter in position on their slates. The girl just selected to hold hundreds stands on the right hand of Mr. Tens.

Again the teacher queries, "How many large bundles does Miss Hundred hold?" *A.* "One."

Q. "How many does Mr. Tens have?" *A.* "Not one."

Q. "How many does Miss Units hold?" *A.* "None."

"Now children just put down under your 99 and under their proper names just what the children in front are holding." One pupil may place the answer in position on blackboard. The blackboard sketch now resolves itself thus:

H.	T.	U.
	9	8
	9	9
1	0	0

The name now comes naturally "One hundred".

Q. "If Miss Hundreds were holding 4 bundles what would the number be?" *A.* "Four hundred." Etc.

Q. "We have a 10 cent piece for 1 cent more than 9. What have we to represent 1 cent more than 99?" *A.* "100 cents or 1 dollar."

Put the figures that tell one hundred on the top right hand corner of your slates, on the lower left hand space, etc. Correct.

IV. The objective teaching of 101, 102, 103, *followed by the symbols and names.*—The teacher turns to the box of slats and selecting one, it is decided that Miss Units keep charge of it. The teacher again draws attention to the amount held by each pupil in the front. Class record in position the figures 101, and readily assign the name. Another slat to Miss Units gives the perception of 102, and the record is made on blackboard and slates. The perception of 103 again gives the pupils ease in assigning figure character and name.

The sketch now stands:

H.	T.	U.
	9	8
	9	9
1	0	0
1	0	1
1	0	2
1	0	3

V. By analogy to deduce the symbols and names of the numbers 104-109.

Q. "What number follows 3?" *A.* "Four."

Q. "What do you think would come after 103?" *A.* "One hundred and four." Record on slates—105-109 are continued in like manner, pupils being selected to continue blackboard sketch.

VI. By means of observation to develop the symbol 110 *and to assign its name.*—One pupil is chosen to give sufficient slats to Miss Units to have the representation of 109 before the class.

Again the teacher turns to her box of slats and takes one in hand.

Q. "Is Miss Units to hold this?" *A.* "No, it must go with her nine into a bundle for Mr. Tens."

This act being performed, the class is required to record the perception of 110 in position on slates and it is also registered on the blackboard sketch. The naming of the number follows easily according to the bundles held by pupils up in front—one hundred and ten.

VII. The new figure characters in use.—

(*a*) Teacher shows a dollar and five cents, requiring the number of cents for answer.

(*b*) Pupils are asked to pick out slats for 101.

(*c*) Pupils are desired to find 110 cents, and should produce one dollar and one ten cent piece.

(*d*) "What number is made up of one bundle of hundreds and nine units?" Record answer on slates.

(*e*) Pupil selected (pointer in hand) to point to certain numbers on sketch, 103, 108, 98, 110, etc.

(*f*) Write on clean side of slate (the B.B. sketch being erased) 104, 99, 101, 110, 102, etc.

(*g*) Teacher writes a single number as 5 on blackboard, precedes it by 2, calls for answer; erases the 2, and puts 8 in its place, and again requires the answer; erases the 5 and substitutes 9 in its place (the answer again being asked for): erases the 8 and places 10 in the vacant spot. The response is again called for. Etc.

A teacher was reading some of Washington's rules of conduct to her second grade pupils. "Never laugh at the misfortunes of another, even though he be your enemy," she read. Thinking that it might be a little hard for the children to grasp, she said: "What is a misfortune?" "It is when you get married," answered tiny Dorothy.—*Ex.*

Little five-year-old Belle's hand was waving wildly in the air. The teacher finally said, "What is it, Belle?" "Well, Joy was—was—" then turning to her seatmate, "Well, Joy, what was you doin' to me anyway?"—*Ex.*

The Recent Contributions of Psychology to the Subject of Reading

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THE process of learning to read involves:

I. The development and control of a complex set of eye movements that must become automatic or reflex in character.

II. The development of independent and automatic word-recognition power.

III. The development of a specialised mode of thinking through the stimulation of written or printed words.

As regards (I.) above, psychological experiments have proven:

1. In reading, eye movements are composed of a succession of pauses and connecting movements.

(*a*) *See diagram on following page for full explanation.*

(*b*) *Such behaviour seems quite unnatural to the eye and can be built up but slowly and only by an immense amount of practice.*

2. Seeing takes place during the pause.

(*a*) *See* 6 *and* 7 *below.*

3. The average number of words seen per pause is approximately 1.5.

(*a*) *Of course this is very variable being conditioned by the nature of the text, ability of the reader, etc.*

(*b*) *The pause may occur anywhere within a word.*

4. The number of pauses per ordinary line is 5 to 8.

(*a*) *The eye does not traverse the whole extent of the line, usually about* 80% *of it.*

(*b*) *It will be noticed that the first pause comes nearer the beginning of the lin e than the final pause does to the end of the line. The rest of the line must be mentally supplied. The mind anticipates the rest of the thought from that already gained.*

(*c*) *Here is positive proof that reading does go on by other means than the recognition of letters.*

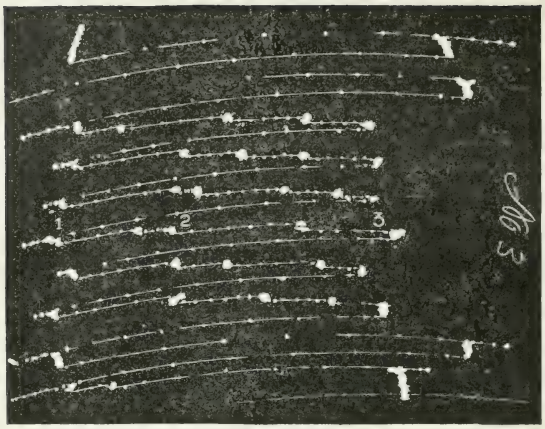
5. There is a tendency to fall into a rhythmical recurrence of the same number of pauses per li e even to the extent of the pauses having a uniform time distribution.

(*a*) *Such a condition is more apt to arise when the matter read is easy and familiar.*

6. Time of pause : time of forward movement :: 1 : 4.

(*a*) *During* $\frac{4}{5}$ *of all the time spent in reading the eye is actually at rest. When one realises, therefore, the rapid rate at which the discrete letters of the printed page strike upon the retina of the eye one sees how impossible it is for significant stimulation to take place during the actual eye movement.*

(*b*) *In this connection recall the Law of Fusion of Visual Images.*



Specimen Curve of 'Spark' Record
Reproduced by special permission of the Macmillan Co. of Canada.

[This reproduction, cut by a careful engraver upon a block on which the original tracing had been photographed, shows with great accuracy the sort of record from which the times of the eye movements have been determined. The chief difference between the original and the reproduction is in the breadth of the horizontal lines which are finer in the original.

The curve shows the movements of the eye in reading six lines, preceded and followed by two free movements of the eye each way, in which it was swept from one end of the line to the other, the beginning and end alone being fixated. The broad vertical lines and the round blurs in the reading indicate pauses in the eye's movements, the successive sparks knocking the soot away from a considerable space. The small dots standing alone or like beads upon the horizontal lines, show the passage of single sparks, separated from each other by 0.0068 sec. The breaks in the horizontal lines indicate that the writing point was not at all times in contact with the surface of the paper though near enough for the spark to leap across, as shown by the solitary dots.

The tracing shows clearly the fixation pauses in the course of the line, the general tendency to make the "indentation" greater at the right than at the left, and the unbroken sweep of the return from right to left.

NOTE. The cut and description are reproduced from the *American Journal of Psychology*, Vol. XI.]

7. The time of pause is more variable than the time of the forward movement.

(*a*) *The variation in the pause goes all the way from* $7\frac{1}{2}$ *to* 26, *whereas the variation in the forward movement is* 6 *to* 7.

(*b*) *This shows that the mind must be doing its work during the pause, the greater length of time indicating a difficulty in the thought content of text read.*

(*c*) *If reading were mere word articulation this would not be true. In such case the time of pause would not show a greater variation than the time of forward movement.*

8. The first part and the upper half of the word influence perception most strongly.

9. The length of a word is not an important factor in its recognition.

10. A word is perceived through its dominating letters or total familiar form.

(*a*) *This is a strong argument for learning words as wholes from the very outset since it is by their total "personal" appearance that they are afterwards recognised and known.*

11. The definite fixing of letters in a word occurs only through a grasp of meaning.

(*a*) *The steps seem to be a recognition of the word through its dominating letters, then the meaning of the word and finally the definite fixing of the letters in the word.*

12. A larger amount can be seen when the words are so arranged that they make sense.

(*a*) *Reading may and does go on by other means than the recognition of letters.*

13. Comprehension of meaning lags behind visual perception.

14. In oral reading comprehension of meaning is ahead of the voice.

(*a*) *In the diagram I have indicated a probable relative position of visual perception, comprehension of meaning and voice by the numbers* 1, 2, 3, *respectively.*

(*b*) *Any method which would have these three centred at the same point at the same time would seriously interfere with the thought process.*

15. A new fixation is made for every unit of apperception.

These are among the important findings of experimental psychologists in recent years.

IV. The problem of independent and automatic word-recognition power will come up more naturally in the discussions of primary methods of teaching reading.

The third phase of the problem, viz., the development of a specialised mode of thinking through the stimulation of written or printed words, will be dealt with in the December number.

Educational Principles and Primary Arithmetic

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ALL education is an ntelligent process directed towards a definite goal. Elementary education must conform to this definition. The teacher must be conscious of the reason for his procedure and just as conscious of the end he wishes to reach.

Whatever our ideals of a completed education may be, it must ever remain that habit building is the most important duty of the elementary school. Reading and writing with ease and intelligence, reckoning with readiness and accuracy and behaving with grace and propriety will always constitute those responses which when habitual are at this stage most desirable because most potential for the child's complete development.

Roughly speaking, we may divide a child's education into three stages:

1. The formation of useful habits of prompt response to certain classes of stimuli.

2. The acquisition of useful knowledge, the basis for subsequent and more widely related knowledge.

3. The attainment of general principles on the basis of facts known, thus simplifying and giving a mastery of the varied phenomena of the world.

However these may overlap, in the main, the order is—forming habits, learning useful knowledge, acquiring general principles.

Of the habits which primary education should form, those which are most universally serviceable for efficiency in life are the most important. To succeed in life: (1) We all must learn largely from books and communicate with others in speech and writing. Hence we must form the habits of ready response involved in reading, writing and speaking. (2) We all must exchange goods and therefore must be able to use the arts of measuring and reckoning. Hence we need the ready responses provided for in the habits of calculation formed by arithmetic. (3) We must associate with others, and if this is to be to our greatest comfort and advantage, we must be able to respond to various social situations with some degree of grace, courtesy and good manners. Hence we need early training in habits of good behaviour formed by using the opportunities offered in the ordinary school life.

These responses also, to be of much use must be automatic. The exercises that make them habitual must be carried on till there is readiness and even joyful readiness in the response. It is the falsest economy

to pass on until this is so. To leave the multiplication table as a whole, for instance, while the class still add 7's up to 42 to learn that 6 times 7 is 42 is certainly to waste both time and energy.

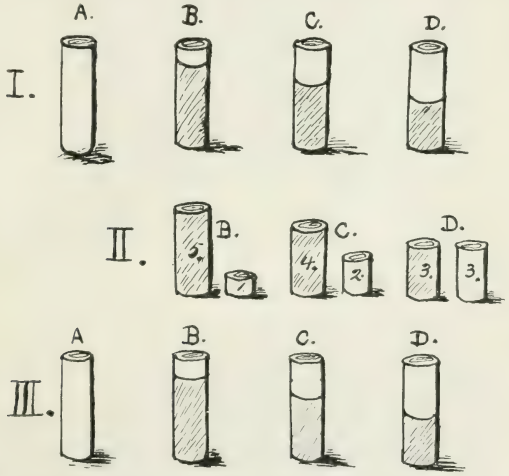
The problem then for the teacher of primary arithmetic is, how shall she establish habits of quick and accurate response to situations calling for quantitative solution such as 6 times 7 = 42, so that the response may be as automatic and pleasurable as possible. The aim is clear; the chief difficulty of the problem lies in the intelligent employment of means to realise it.

This briefly stated implies, at least, three things:

A. Some knowledge of the way in which thought grows in clearness.

B. Some knowledge of the laws of habit formation.

C. Some knowledge of the natural tendencies of the child at the different stages of his development.



A. The mental movement by which thought grows in clearness follows a certain course which may be described as Analytic-Synthetic. This movement begins with simple apprehension of that which is to be learned, and always returns upon itself with a now more or less complete comprehension of the character or meaning of that with which it began. A clear conception of this process or movement is very desirable and to aid in the conception of it, the following illustrative example is given. It will appear throughout that Analysis rests fundamentally on the power of the mind to note differences while Synthesis is based on its power to perceive likenesses.

Let the aim of the lesson be to learn the addition facts of "six".

Place on the desk before the class 4 cylindrical columns *A*, *B*, *C*, *D* as in fig. I. *A* is a solid cylindrical block 6 in. high and 2 in. in diameter. *B* consists of two parts, a lower dark coloured block as shown 5 in. high, on which stands a light coloured 1 in. block. *C* and *D* are as indicated.

Ask which is the highest tower? To show that all are of the same height, place a board or straight ruler over all. If the pupils in learning previously to count have learnt to measure with different units of length, and can therefore measure the height of *A*, marked in inches, the *aim* of the lesson may be stated somewhat as follows: "What different lengths go to make up a tower 6 in. high?"

Here we have the starting point—the first requisite, namely a problem, a situation, to be understood quantitatively. At once, through the sense of sight there is some vague comprehension of the answer. The next step is Analysis. This is possible because parts may be discriminated. In *B* we have a dark 5 in. length and a light 1 in. length. The colour helps the discrimination. The size would make the discrimination easy if there were no difference in colour; and if size and colour were the same, position would make discrimination possible. The children might be made to make the *Analysis* by being asked to take down the columns or towers. The result would be as shown in II. 1, 5; 2, 4; 3, 3.

If the children be now asked to build again the towers, the mechanical reconstruction will appear as in III. The corresponding mental *Synthesis* would find expression in words like

5 inches and 1 inch make 6 inches
4 inches and 2 inches " 6 "
3 inches and 3 inches " 6 "

or

6 inches is made up of 5 inches and 1 inch, etc.

The basis on which depends the mind's power of grouping or synthesising is the likeness expressed by the word *inch* or *inches*. If the objects were such as—book, bell, pencil, crayon, pen and pointer the likeness would consist in mere "oneness" or that which remains after abstracting all concrete qualities, hat is, mere *being*. The difficulty in getting a concept of number lies in this abstraction. Sometimes it may be aided by using other objects (marbles) after using the blocks, so that the number idea may be seen to be common to the two sets and independent of the character of the objects used.

If line III. represents not only a mechanical reformation but also a mental synthesis involving conscious abstraction, there is a return of the mental movement on itself, from a numerically vague idea of *A*

with which we began to such a comprehension or understanding of it as finds expression thus—

$$6=5+1=4+2=3+3.$$

Now since this movement depends on the character of thought itself it is not restricted to any lesson or class of lessons but is found everywhere. To understand a sentence or a poem the same process must be gone through. A glimpse at the whole resulting in a vague conception of its meaning, *Analysis* to reveal "what is in it", with subsequent synthesis to assemble our deas and to return to the situation now more or less fully understood.

B. If "habit is nine-tenths of life" the formation of habits should form, at least in the plastic period of life, a somewhat corresponding ratio to the total task of education. Economy in habit formation can only be secured through some acquaintance with its laws, which may briefly be stated as follows:

1. The Law of Concentration. Strike the problem hard.
2. The Law of Attentive Repetition. Strike it often and with care.
3. The Law of Permitting no Exception. Strike it and nothing else.

(1) The first law demands a focussing of the powers of the child on the task. The child's interests and ins incts are used to deepen first impressions. In the lesson on number referred to above, interest in towers, in high things and their measurement, in handling things, tearing down and building up structures are appealed to that impressions may be, through attention, clear and lasting. It is found by experiments that brief periods of intense concentration are more economical in time and effort than longer periods where fag begins. Five minutes of brisk concentrated drill on a multiplication table, conducted by the teacher, will do more towards fixing the table than 30 minutes of lifeless study at the seats. It is in this connection that the concrete, when wisely used, tends towards concentration of mental effort and consequent clear impression.

(2) The Law of Attentive Repetition has always been much used but generally with too little emphasis on the attentive element. Mere repetition of itself is of value but the interest which makes it attentive, that is, which turns it into a purposeful activity, greatly multiplies its va'ue. This of course means nothing less than drill; and drill is sometimes drudgery. But such drill is not drudgery and besides, drill is absolutely necessary. The theory of spontaneous interest as a basis for learning many things fails utterly because there are many things which it is necessary to learn concerning which the learner has no spontaneous interest. The reaction against drill has gone too far. It has however given us some gains. It has helped us to improve drill by enlisting in its service some of the child's natural tendencies—his eagerness to set up automatic responses through play activity, his love of imitation, his delight in rhythmic repetition, to mention only a few.

(3) The Law of Permitting no Exception, of "Losing no battle", suggests that in the early stage of the formation of any habit the teacher give the closest supervision to see that there is no response other than that intended. In habits of thinking secure accuracy first, speed afterwards. Never to have failed to be correct, in a response, gives confidence and strength; while the least lack in accuracy may soon shade off into actual error.

C. In addition to some knowledge of the movement of thought in the acquisition of facts and the laws of habit formation, the primary teacher especially, should know something of the dominant instincts and tendencies of the child at its various stages of development. In number work it would be useful, for example, to know that between the ages of 4 and 7 years, the child does not when playing regard himself as playing but as living a life. Hence any activities, however fanciful, if made to embody the idea of number can be made the basis for teaching number. He makes the world in which he acts—

"A very hunter did I rush
Upon the prey; with leaps and springs
I followed on from brake to bush."

If now this world of the child is made so that it demands a knowledge of simple numbers the child will meet the need to cope with the situation. Motivation, so difficult to secure later in school life, is here easy, since an imaginary situation is to the child a reality. The child of from 7 to 12 years of age has a very different world for, "Shades of the prison house begin to close upon the growing boy," and the glories of fairy land "begin to fade into the light of common day". He now begins to demand real situations, and the practical problems of his environment interest him. He wishes now to *do* things; to be a worker in the world of things. He is interested in results. The teacher can now profitably avail himself of this disposition to help in having the boy calculate quantitative results, the data being taken from real life. His chief interest is still in the *results* found, not in the *why* of the operation. This points to the inadvisability of attempting to rationalise every process before it is mastered. If the child demands the *why* of the process or if the rationalisation helps in securing a readier response let the reasons for the several steps in any process be given; but if not, do not trouble him with what neither appeals to him nor is of service to him. Enough has been said in this connection to indicate the value to the teacher of some knowledge of the leading natural tendencies of the child at the various stages of his development.

Nothing or next to nothing has been written on the various devices by which the skilful teacher clothes bare principles in a concrete way for the child. Devices to be effective must be tried out by each teacher

and in no case must be emphasised too much. They very often prevent a broad outlook by the teacher on his work much as a too close view of the trees of a wood hide its size and outline.

Merely a rough sketch of some of the principles underlying primary teaching has been submitted with the hope that it may prevent a too narrow view of this important work, and at the same time encourage teachers to become better acquainted with these principles.

Suggestions for the Class-room

The Cinematograph in the School.—The use of the cinematograph in the school is at present a question of debate. An English commission has decided that the value of the moving picture has been greatly overestimated. All can see how it might be made of great value. The chief difficulties at the present time are the high cost of the machine and the prohibitive price of the films. Moreover, good films are difficult to procure.

Some manufacturers in England are endeavouring to produce machines at a suitable price and films suitable for school use. A first-class machine, such as the better ones made by Newton & Co., of London, almost entirely eliminates the flicker, but fair machines can now be purchased from Butcher & Sons, Farringdon Ave., London, England, for about seventy-five dollars. Cheap machines can also be purchased from Timmermann, 13 Bartlett's Buildings, Holborn, London, and from Hammel, 273 Halton Garden, E.C., London.

The films present a greater difficulty than the machine. They are difficult to buy in Ontario, as their manufacture is largely in the hands of combines that rent them. The only manufacturer who up to the present has issued an extensive catalogue of films is Charles Urban Trading Co., Limited, 89-91 Wardom Street, London, W. These films cost eight cents a foot and the following titles and lengths will give a good idea of the quality and the price: "India Tea-growing", 435 feet; "Cattle Rearing, Uruguay", 300 feet; "Making of a Newspaper", 790 feet; "Borneo", 450 feet. Pathé Frères, 51 Rupert Street, London, W., have an enormous stock of valuable films but issue no catalogue.

Australia now issues films showing the resources of the Commonwealth and lends them free in England. South Africa is about to do the same and according to the daily papers the Ontario Department of Agriculture is about to issue sets of films to assist in showing the farmers of the province scientific methods of agriculture.

Current Events

EVERY professional educator, every "man of the book" who has not lost interest in the world about him, will watch with sympathetic interest the career of the lately elected President of the United States. We have not forgotten the flood of cartoons that welcomed the advent of the schoolmaster president. He was represented as the stern pedagogue, arrayed in cap and gown, or armed with the birch. It seemed to some a foregone conclusion that he, as a man who had written books and taught government to college classes, would probably fail as an administrator. Others, however, remembered his career as Governor of New Jersey, how he had compelled obedience to the laws, had required the Public Service Corporation to live up to its obligations, and found it too, an easy matter to do so.

Shortly after Mr. Wilson's election he added another to his list of published books, perhaps a bold thing to do, especially if we recollect that this book, "The New Freedom", was a collection of campaign speeches dealing with what he considered the most important topics then under discussion, the tariff, the trusts, the currency bill, the moneyed interests, and the necessity for public recognition of the fact that a new social order had arisen in the last twenty years. The book is a most interesting confession of political faith, doubly interesting when we consider that the author has now an opportunity, almost without parallel, to carry his views into operation. For Woodrow Wilson gained his nomination and election without embarrassing alliances and unbound by specific pledges and his party has the support of majorities in both the senate and the House of Representatives.

Though President Wilson has been in power only six months he has already accomplished much. On September 9th the Senate finally passed the tariff bill; a preliminary to the reduction of the high cost of living. "The result is a reduction of nearly one-half in the average tariff on foodstuffs, a reduction by one-third in the average tariff on earthenware, the placing of raw wool on the free list, a reduction of nearly two-thirds in the woollen tariff, a 'big cut' in the sugar tariff and its abolition in 1918, and a removal of all the duties on meats, fresh dairy products, flour, potatoes, coal, iron ore, lumber, and several classes of farm and other machinery."

To make up somewhat of the loss in revenue from these wholesome reductions, the bill introduces the federal income tax. From this income tax, however, unmarried men are exempt up to $3000.00, and a married

man with two children is exempt up to $5000.00. The rate of taxation moreover, is graded so as to press more heavily on the wealthier classes. The great majority of the people, it is evident, will pay no tax.

At the same time the government is carrying out the pledge to reform the Banking and Currency system in such a way as to provide, in times of financial stress, for a readier and more equitable extension of credit. The Banking and Currency Bill passed the House of Representatives last month.

In the meantime the course of foreign affairs has not been undisturbed. The Japanese crisis in California arising from the attempt of the State of California to restrict ownership of agricultural lands in that state must have caused anxious moments. The Mexican crisis is fresh in our minds, and is noteworthy for the great importance thus attached by a first class government to moral considerations in international affairs. The first six months of President Wilson's administration have surely been sufficiently strenuous.

With two such important matters as the tariff and the currency dealt with, Mr. Wilson will attempt to make good his views regarding the means of preventing moneyed interests from exercising undue influence in government or in business; in other words, to curb the trusts and monopolies. In two means of reform President Wilson has great faith, more publicity in public affairs and more discussion of them by the masses of the people. He says: "The prosperity of this country depends upon the interest of all of us and cannot be brought about by arrangement between any groups of persons. This is what sometimes happens: they promise you a particular piece of legislation. As soon as the legislature meets, a bill embodying that legislation is introduced. It is referred to a committee. You never hear of it again. What happened? Nobody knows what happened."

"I am not intimating that corruption creeps in; I do not know what creeps in. The point is that we not only do not know, but it is intimated, if we get inquisitive, that it is none of our business. My reply is that it *is* our business, and it is the business of every man in the state; we have a right to know all the particulars of that bill's history. There is not any legitimate privacy about matters of government. Government must, if it is to be pure and correct in its processes, be absolutely public in everything that affects it. I cannot imagine a public man with a conscience having a secret that he would keep from the people about their own affairs."

Again, "The burden that is upon the heart of every conscientious public man is the burden of the thought that perhaps he does not sufficiently comprehend the national life. For, as a matter of fact, no single man does comprehend it. The whole purpose of democracy is that we

may hold counsel with one another, so as not to depend upon the understanding of one man, but to depend upon the counsel of all. For only as men are brought into counsel, and state their own needs and interests, can the general interests of a great people be compounded into a policy that will be suitable to all."

"You know that the great melting-pot of America, the place where we are all made Americans of, is the public school, where men of every race and of every origin and of every station in life send their children, or ought to send their children, and where, being mixed together, the youngsters are all infused with the American spirit and developed into American men and American women. When, in addition to sending our children to school to paid teachers, we go to school to one another in those same schoolhouses, then we shall begin more fully to realise than we ever have realised before, what American life is. And let me tell you this, confidentially, that wherever you find school boards that object to opening the schoolhouses in the evening for public meetings of every proper sort, you had better look around for some politician who is objecting to it; because the thing that cures bad politics is talk by the neighbours. The thing that brings to light the concealed circumstances of our political life is the talk of the neighbourhood; and if you can get the neighbours together, get them frankly to tell everything they know, then your politics, your ward politics, and your city politics, and your state politics, too, will be turned inside out,—in the way they ought to be. Because the chief difficulty our politics has suffered is that the inside didn't look like the outside. Nothing clears the air like frank discussion."

W. E. M.

Each pupil is required on Friday mornings to respond at roll-call with an appropriate quotation. One small boy failing to do so, remained at noon to look one up and recite it. When called upon he arose and amid tears, faltered out, "Nobody cares whether I live or die,"—and unable to proceed, sat down.—*Ex.*

"Now, Michael, can you tell me the difference between 18 and 12?" And Michael for once in readiness replied, "One's bigger'n the other."—*Ex.*

The question, "What are the red blood cells, and their use and size?" was given in a fifth grade physiology examination. One girl replied, "The red blood cells are about as big as a cake or biscuit and their use is to remove gases and sponges from the body."—*Ex.*

The Fanciful in Stories

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HAT a charm to children is a well-told story! The good and bad characters live and act as real beings, and endow themselves with powers for good or ill, with virtues and with vices; unexpected situations occur, expectancy runs high, evil forces are at work, the hidden danger looms up, fear is upon all, friends and help come, the wicked deed is avenged, and the better triumphs. Excitement and calm, hope and fear, love and hate, follow each other in turn, and when all is through a sigh of relief is heard with the satisfaction that all things come out so well. The heart and soul of the listeners have been in sympathy with everything that happened. Yes, stories are children's delight!

And did it ever occur to the teacher of these children in the dull hum-drum school, or in the bright, cheerful, happy schoolroom (for such there are some places) that these same children, who so love to hear "Once upon a time there lived somebody somewhere", could tell the wonderful happenings, for all things are wonderful in real stories, in *picture* form as well as see them in their sympathetic imagination. If you, the teacher, only allowed them, and assured them of their ability to do so, the pupils would draw out their crude but vivid imaginings on paper, with an intensity of feeling and certainty of thought equal to that experienced in listening to the stories. Often the most difficult things are the easiest. And children that cannot draw a recognisable water-pitcher, when given a chance, can depict a whole scene of characters doing things and acting together, and that with marvellous intelligibility and originality.

The illustration of stories is not difficult even to small children. The smallest child in the school can illustrate many little stories of fairies, and brownies, and old women, and funny men, boys and girls, and even animals they have never seen, in places known and unknown, with a style all their own, and with real success, if we realise truly what success in this may be. Indeed even the younger child can often do better than the older one, the younger fearing no difficulty and proceeding with full confidence, the older with greater knowledge of form and tone, hesitating, and fearing that mistakes and absurdities may appear. That is why we should start the stories with the younger children so that there never may be any fear of failure on their part later on.

All you have to do with the pupils is to give them a chance! Provide the means. A quick, easy, free or flowing medium must be at hand, that will mark, modulate, change, obliterate, and appear again with perfect readiness,—such as charcoal on paper, or indeed pencil on slate, large carbon pencils, paint, or even ink with brush. It is wonderful what fine effects can be got out of rough mediums, as charcoal or ink and brush silhouette; the very leaving out of the details kindles the imagination of the beholder, and a hundred things that are not there at all become present and take a part in the picture, enriching the thought with a wealth of suggestion.

So, teacher, just begin the first convenient opportunity. Announce to the class that you are going to tell them a story (a *story;* that is sufficient), and that they are to draw a picture of what they see in their mind.

What story should it be? Well, that depends on the class you have, whether they are familiar or unfamiliar with stories, what ones they have heard, what kinds interest them. But there are some stories that all children endowed with human interest in their fellow-selves, and possessing the ordinary likes and dislikes of human beings, are interested in. Was the story of Little Red Riding Hood ever told without the hearers being fearful of her safety, and glad that her life was saved, or was there ever a boy or even a girl that did not sympathise with poor little Dick Whittington travelling with his lone cat on the way to great London to make his way in the world? There are a hundred stories that would do. Just a simple one at first is better, of one scene and of perhaps only one character; later they can try more difficult ones.

Then tell the story, and tell it well, in an interesting way. The start must be a good one, the key-note must be struck, and every part keyed up to it:

"Long ago, when every one on earth was a fairy, a prince lived all alone in his castle,"

or,

"Once upon a time on the mountain sides of Switzerland, there lived an archer by the name of William Tell,"

or,

"Any one who has taken a trip up the Hudson will remember, with pleasure, the Catskill Mountains rising up on the west from the banks of the great river."

Then tell the class what happened, and what happened after that; don't hurry; there is much joy in anticipation, don't tell your secrets before their time, throw in a little advice on the way, for children like a few morals drawn; use simple language as suits the occasion, act the story, put yourself in harmony with it, and when you are through,

stop; leave something for the mind to ponder over; answer the children's questions, but don't tell too much; part of the joy is in having the curtain drawn and allowing no more to be seen. And you will have painted on their little minds pictures as clear and vivid as the real world can show or as dreamland ever dreamed, which will not be soon forgotten.

Then each pupil tells the story in his or her own way, quickly, spontaneously, but thoroughly, with all the essentials noted. One representative scene may be enough. Do not expect too much.

Fig. 1. The Pied Piper and the children. Fig. 2. The Pied Piper first approaching the Town Hall. Fig. 3. The Rats following the Piper. Fig. 4. The Old Woman who sweeps the Sky. Fig. 5. The Old Woman who sweeps the Sky.

[The first three were drawn by Fourth Class Pupils, the last two by Second Class Pupils.]

And when the pupils have done, set up a row of their pictures, and have a chat about them, and if they have flagrant faults or even small faults the little artists will note them. There will be much variety. The children will see others have pictures somewhat different from theirs, that there are many ways of telling in picture the same story.

The powers of depiction thus developed in the children may be turned to good account in other subjects o school study. The lessons in literatu e may be illustrated, history can be told in picture form, the written composition can be illustrated with little pictures and decorations; even the illustrated booklet is possible, on a story of several scenes, or on some place or occupation.

But greater still, what an influence this power of depiction may surely have on the life and temperament of the children, how the emotions may be first stimulated, and then controlled, how the reason may be the better developed, and what an improvement may be in taste and personality! Many a dreary hour may be cheered by thoughts of those pleasant pictures of mind and paper. And when far beyond the school days the pictures which were once a joy will come to life again with renewed pleasure. And minds will go back in a dream, back to the fairy-land of youth—when the Goblins and the Fairies played together, and the Brownies did their tricks, and Princes and Princesses lived in castles, and Witches came out at night, and Elves danced, and Fairy Godmothers with golden wands transformed the Ugly to the Beautiful, and the Good triumphed over the Bad!

Please, teacher, is it true? Are there any fairies now?

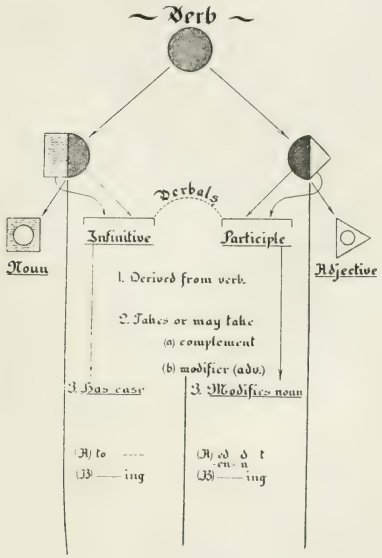
Suggestion for the Class-room

A Geography Device.—By spending a little money for postage I got an outfit of time-tables, maps and guides that covers the whole United States. Now, in geography period I announce a journey to the class—from Portland, Maine, to Cleveland, Ohio, for instance—and they plan out the best route, just how many miles it is, where they would change cars, how many hours they must spend on the road, and so on. They think it is great fun, and they're getting such an accurate idea of directions, locations, and distances.

Isn't that rather a clever idea? And it is capable of infinite extension. When your geography class approaches the map of Europe, for instance why not send to the railroad and steamship companies, the tourist agencies and the travel bureaus, for their catalogues and booklets? Many of these free booklets are beautifully illustrated, and, being a part of the real machinery of travel, they will appeal to the child as no mere text-book can. A glance through the advertising pages of any good magazine will give you numerous addresses of people who are eagerly awaiting your requests for their literature.—The *School Journal.*

Infinitive or Participle

D. A. GROUT, LL.B.
Assistant Superintendent of Schools, Portland, Oregon



PUPILS in the elementary schools find great difficulty in distinguishing infinitives in "-ing" from participles in "-ing." I have used the plan here suggested very successfully for some time.

Place on the blackboard a circle—better in coloured chalk—to represent the verb. Let a square in a different colour represent the noun, and a triangle in a third colour represent the adjective.

In a review lesson draw from the class that, derived from the verb, are two classes of words, which vary in nature as they go towards the noun or towards the adjective, and partake of the nature of one or the other of these.

1. *Selling* papers is hard work.
2. The boy *selling* papers is happy.

Develop diagram and note that "selling" in No. 1 has a double nature, part noun and part verb, as illustrated by the figure composed of half a square (noun) and half a circle (verb). As a noun, "selling" is a subject and is in nominative *case;* as a verb it has an object complement, "papers". This is called the *infinitive in "-ing"*. In a similar way develop the idea of the double nature of the participle.

It is always best to insist that pupils apply the three tests to determine whether a word is a verbal. First, is the word under consideration *derived from the verb?* Second, does it take a *complement* or an *adverbial modifier* or *both?* Third, has it *case* or does it *modify* a noun or its equivalent? Of course, the *third* test determines whether it is infinitive or participle. Follow the diagram.

The diagram may also be used to show that verbals develop further in either direction, and may become pure nouns or pure adjectives as the case may be.

3. Quick *selling* is profitable.

4. The *selling* price is low.

The diagram should be left on the blackboard for some time and put to daily use; and pupils should also make copies of it for individual use.

Suggestion for the Class-room

For Discussion.—Good and Bad are two boys, each fourteen years of age. They attend the same school. One day Bad said to Good, "I am going to throw a snowball through the window". Good made no reply. Bad threw the snowball and broke the window, and Good saw him do it. The next morning at school the teacher asked the pupils singly and privately the questions, "Do you know who broke the window?" and "Who broke the window?"

1. What should Good say when the teacher asked him, "Do you know who broke the window?"

2. What should Good say when she asked him, "Who broke the window?"

3. Should the teacher have asked the boy these questions?

4. Should the teacher have the same right as the court in compelling Good to tell?

5. Modern American schools are rapidly adopting systematic instruction in ethics. In your opinion, should children throughout the public schools be *taught* that it is their duty to tell the truth about wrongdoing when questioned by a competent authority?—*The Outlook*.

Handwork and Literature - Experiments and Suggestions

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IN the September issue of THE SCHOOL (p. 36) the result was given of two experiments made in connecting pupils' handwork with their Literature. The media used were water colours and lead pencil. In the present issue another illustration is given from paper cuttings and was inspired by two lines from the same poem;

"From out the gloom sails the silv'ry moon
O'er forests dark and still."

It keeps in mind also that the location previously suggested was "by a glassy lake".

See that the objects involved are vividly in mind. When the moon woke last night how did she look? "Round", "silvery", "large", may be among the answers. Where was she? "Off behind the hills", or "way out on the water"; perhaps she was very near the water, possibly just peeping over the hill, so one could see part of her, or she may have been high in the sky. What colours were ground and sky? If viewed over water, describe the reflections. How much of the

paper shall be ground and how much sky? Not half of each, in any event, for we have learned in the nature drawing that it does not look well to divide our paper in the middle. If the moon is high, there may be more sky and less ground; if low, more ground. What kind of line does the forest make against the sky? Shou'd the highest part be in the middle or toward one side? Let the children suggest.

For the above illustration gray paper was used for sky and water, and a dark green paper for the forest and shadow. Fold the dark green paper and cut out the line of the trees or forest. Unfold, and it is duplicated. Cut these apart and paste them on the gray background, a slight distance apart, showing the shore line. Cut the moon from white paper and paste it on. The reflection of the moon was torn from white paper. Trim the picture and mount on a dark paper.

Coloured crayons might be used very successfully to represent the scene suggested by the lines:

"When darkness falls on our canvas walls,
We kindle the camp-fire's blaze."

What preparation do pupils require for this work in illustration?

1. The literature lesson should be made sufficiently interesting to result in appreciation and a desire for expression.

2. Question as to the elements which must be embodied in the illustration to make the picture unmistakable. For example, in the accompanying illustration, the necessary elements are: sky, lake, moon, forest, reflections.

3. Have the mental picture sharp and definite before the drawing begins. Make sure that the objects involved are vividly in mind. For instance, if a tree must be included in the illustration, have each pupil select some tree which will be convenient for him to examine daily as he passes to and from school. Encourage each one to stop and study his tree every time he passes it. The best encouragement you can give is to give him something definite to look for, such as:

(*a*) Proportion between height of trunk and height of foliage—height of foliage and spreading of foliage.

(*b*) Shape of trunk—how it forks into the ground—any branching to be seen below the foliage or through the foliage.

(*c*) Difference in texture between trunk and foliage. The trunk is hard and firm, therefore in drawing it we hold the pencil in the ordinary way for writing and use hard, firm strokes. We feel the hardness and firmness in our fingers as we work. The foliage is soft and airy. See how easily it is blown by the wind. In drawing it, therefore, we hold the pencil lightly, under the hand, and use soft, light, wavy strokes.

When it is impossible for the children to view objects, place suitable pictures before them. All will help to make their images more real.

4. Now comes the task of combining these different elements. Good ideas in composition may be gained by having pupils look through a finder at actual trees, hills, water and sky. Here they may be able to select a portion that would be suitable for the illustration required. When conditions are such that this is impossible, let the pupils use photographs of nature as a substitute. Good use may be made at times of those to be found in the Public School Geography or on Picture Postal Cards. Landscape pictures cut from papers or magazines serve very effectively. The pupil may take as much or as little as he chooses, and revise its proportions to make what essentially becomes a new and original composition.

Now let each child sketch his idea. Have the drawings exhibited along the chalk rail, discussed and ranked according to success in picturing the event. Have the pupils make improved drawings in the light of these criticisms. Print the lines which have been illustrated on a large sheet of paper. Arrange and paste some of the best drawings on the same sheet. Draw an enclosing line around the whole and let the children enjoy the exhibit.

These illustrations might later be developed into posters or book covers.

The teacher was hearing the grammar class.

"An abstract noun is the name of something which you can think of but not touch. Now, Philip, can you give me an example?"

Philip looked thoughtful for a moment, then his face brightened.

"Yes, ma'am, he said, "a red-hot poker."—*New York Times.*

Teacher—Nellie, what plants flourish in excessive heat?

Nellie—Ice plants.—*Boston Record.*

Teacher asked the fourth grade reading class: "What are 'enemies'?" Laura replies: "It's your relations."—*Ex.*

A schoolmaster in the country delivered an address to the scholars, of which the following passage is an example:

"You boys ought to be kind to your little sisters. I once knew a bad boy who struck his little sister a blow over the eye. Although she didn't fade and die in the early Summertime, when the June roses were blooming with the sweet words of forgiveness on her pallid lips, she rose and hit him over the head with a rolling-pin, so that he couldn't go to school for more than a month, on account of not being able to put his hat on."—*Chicago American.*

Uniform Proficiency Examinations

A County System for Public Schools

V. K. GREER, M.A.

Inspector of Schools, Dundas County, Ont.

[Inspector Greer was asked to give this article as a commencement for the discussion of the Examination problem. We shall be glad to publish, and he will be glad to read, an article written from the opposite view-point.—Editor.]

THE system of public school examinations to be outlined in this article is one which has been in use in three of the County Inspectorates of Ontario for a number of years. The examinations are not used as a complete basis for the promotions from form to form; but are used as a means of obtaining uniformity and a high standard of proficiency in the rural schools. The results of the examinations considered along with the information obtained at his two or three visits a year to the school, enable the inspector to form a fairly accurate judgment as to the proper classification of the pupils and the efficiency of the work being done.

If every school could have a qualified experienced teacher there would be little need for the proficiency examination system. But at the present time there are many rural schools in which a change of teacher is made two or three times in a year; and the percentage of rural schools where the teacher remains longer than two years is, in one of the inspectorates mentioned above, less than 15%. Consequently the classification of the school cannot always be left to the teacher. The proficiency examination conducted independent of the teacher prevents the teacher who makes a change of position semi-annually or oftener from leaving behind him an unmerited record of promotions.

The writer has not taken care in the following account to adhere to the system of examinations as it has actually been for any particular year. It is also not desired to give the impression that this system of examinations has not given results which are completely satisfactory. The examination, used to the extent already mentioned, is believed to be much more satisfactory than no uniform examination at all.

The examinations are held in every public school of the three inspectorates on the last two school days in June of each year.

In January the three inspectors of the counties meet and jointly make out the question papers. Each inspector comes to the meeting with a list of questions on each of the subjects of the Course of Study: and also a list of suggestions touching on points wherein he believes the exam-

ination may be improved for the coming year. Two or three days are taken in the preparation of the question papers and every question is thoroughly discussed before being placed on a question paper. At this time each inspector chooses twelve to fifteen valuators from his teachers to correct the pupils' answer papers. Each valuator is asked to examine one or two subjects of a class for the whole county. Care is taken to choose only successful experienced teachers for this work.

At this January meeting of the inspectors a circular containing complete information about the requirements for the coming June examinations is prepared and sent to each teacher. Along with the circular is sent the form containing the regulations for the conduct of the examinations and the form containing the names and addresses of the valuators. The last two forms are to be placed in a conspicuous place in the class room for the information of the pupils and later for the guidance of the presiding teacher.

The Counties' Council for the three counties votes a special grant to each inspectorate to defray the expenses of printing, fees to valuators, and incidentals.

In May two blank schedules are sent out to each teacher. The teacher is directed to enter in them, alphabetically and beginning with the Senior Fourth class, the names of the pupils of the school. One schedule is to be returned at once to the Inspector and the other to be retained by the teacher. Upon receipt of the answer papers from the valuators after the examination the teacher will enter the marks of the pupils on his copy of the schedule and place it in a conspicuous place in the school class-room to remain there, for the information of any one interested, for the coming year. The Inspector will enter the marks in his schedule from the post-cards sent to him by the valuators. Upon receipt of the schedule from the teacher the Inspector is able to parcel the question papers ready for mailing. Arrangements for presiding officers and for distribution of question papers are made as for Departmental Examinations.

Each teacher leaves post-cards in the school, one for each subject of each class. Each of these post-cards is addressed to the Inspector. On the back of each card the teacher writes, at the head of the card, the name of the school section, the township, his own name and the address to which the answer papers are to be returned. Below this he writes the names of the pupils in the class in the same order as they appear on the schedule sent to the Inspector. A column is ruled to the right of the names for the marks and at the top of the column the name of the subject and class is written. As soon as a subject of examination is finished the presiding teacher folds in with the answer papers of the subject the proper post-card and the return postage and sends the parcel to the valuator. When the valuator opens the parcel he finds at once the list of names.

When the valuator finishes examining a subject of a class of a school he enters the marks awarded on the post-card found in the parcel. He initials the card and immediately forwards it to the Inspector. The parcel of answer papers is at once mailed back to the teacher whose address was given on the card. If the required post-card is not found by the valuator the parcel of answer papers, after being examined, is mailed to the Inspector.

As soon as the results are all sent to the Inspector (which must be not later than two weeks after the last day of examinations) the marks are totalled. From the marks and his knowledge of the work being done the Inspector, with the help of the Secretary, makes out the list of promotions for each school and reports the names of successful candidates at once to the teacher to be made known to the candidates.

Certificates of promotion are awarded to all successful candidates and are given out during the fall term.

In this system there are three different examinations: (1) from Senior Second Class to Junior Third; (2) from Senior Third Class to Junior Fourth; (3) from Junior Fourth Class to Senior Fourth. The teacher makes all promotions up to Senior Second Class and also from Junior Third to Senior Third. The purpose of the Junior Fourth examination is to assist the teacher in selecting the Junior High School Entrance class for the coming year.

Book Reviews

Handbook of Nature-Study, by Anna Botsford Comstock, B.S. 234 lessons, 950 pages, more than 1000 illustrations. 150 of the lessons bear directly on Agriculture. To meet the needs of untrained teachers, this is without doubt the best book we have yet seen. The facts that the teacher should know regarding each topic treated are given as the "Teacher's Story"; this is followed by a "Lesson" in which are outlined the observations to be made by the children. We know of no other source from which a teacher can get so much practical assistance particularly from the standpoint of well organised matter. Part I. treats also of the methods of teaching Nature Study. Published by the Comstock Publishing Company, Ithaca, N.Y. Prices: bound in one volume, postpaid, $3.65. Bound in two volumes, postpaid, $4.50, or separate volumes $2.25 each.

W. L. C. R.

Two Hundred School Art Exercises Illustrated is the name of a useful series of helps for Canadian teachers of Art. It has been designed by Mr. R. F. Fleming, Art Instructor of the Ottawa Normal School, and is published by the Arts Design Co., of Ottawa. 15 cents per set.

Scraps from a County Inspector's Note-Book

Many teachers stand so close to their work that they fail to see it. They are so taken up with the details—the routine—that they fail to grasp the meaning of their work as a whole.

In the opinion of many people, and *some* teachers, teaching consists of imparting *facts* to the pupils. The facts of history, its battles and dates, may have a certain educational value, but real history is the story of the growth of civil and political liberty.

At the beginning of the term the teacher should ask herself, "What is the object of my teaching?"

Recently a teacher said to me, "It is all right to talk of 'ideals and the end of education' at Normal Schools; but when the teacher comes face to face with her school, and realises the amount of work to be done, and the short time in which to do it, ideals fall into the background".

She said further, that she was given a certain ground to cover, and was expected to do it, and that she was considered unsuccessful, if she failed to teach even the "most useless subject".

How can we classify subjects as useful or useless, unless we have an ideal or an end in view? I know that many people to-day would do away with all subjects that do not possess what they are pleased to call "utility". That a subject may have "utility" does not mean, in the minds of these people, that it shall affect for good the life and character of the pupil, but that it will confer on him some power that can be measured in dollars and cents.

Believing as I do, that the object of education is the formation of character, I hesitate to call any subject useless. Whether we are conscious of it or not, in teaching any subject, we are making the characters of our pupils stronger or weaker. The pupil is acquiring habits of industry and carefulness, or of idleness and indifference.

It is not enough that the pupil be able to *do* the problem in algebra or arithmetic. He should do it *correctly*, and, if possible, at the first trial.

If we encourage him to "try, try, again", we may not be teaching him perseverance, as much as we are impressing him with the idea that errors do not make any great difference.

In real life there are many things that must be done correctly the first time, or the opportunity for doing them is lost.

A young lady, who has left the teaching profession (she was not a striking success), told me that one of the reasons she left the work was that she became tired of "hearing lessons". I do not wonder that she failed.

"Why did you not try to teach the children?" I asked.

"There was no time," she replied. "When I got through with the regular work, it was time to dismiss."

She complained further that it was hard work keeping thirty-five children *quiet* for five hours each day.

I agree with her, and I think it would be wasted effort to keep one child *quiet* for five minutes.

BLUENOSE.

Suggestions for the Class-room

Posture.—While we lay a great deal of emphasis on the physical education of our pupils, and while we realise that the body must be trained as well as the mind, are we giving sufficient attention to the posture assumed by boys and girls? There can be no special lessons in posture, but it must be taught constantly in the class-room. Pupils must be trained to walk erect, to sit without lounging, to stand without shuffling, to be prompt in all their movements. Good posture makes for social efficiency as does no other physical attribute, because an upright and correct position maintains the vital organs in functional relation to one another, and makes for a natural condition of bodily health. If one takes a posture requiring the minimum of effort because of proper relation and average of parts, he will have the maximum of energy with which to study, exercise, and play. Another reason for the importance of posture is its psychological effect upon the individual and upon others. Poor posture induces sloth and pessimism, while good posture tends to a bright and courageous mental outlook.—*The Educational Bi-Monthly.*

Dates in History.—Now I want to say right here, to avoid any misconception, that I am a firm believer in outlines and dates; that I think they are as essential to the correct understanding and appreciation of history as bones are to the symmetry of the body and, if your imagination is vivid enough to conceive the pulpous, jellyfish-like object the human form would present without any bones you have my idea of history without any dates. But this truth—if I am right in my attitude—does not destroy the fact that dates *are* bones and that, like some other excellent devices, they should be used in moderation and with a particular and clearly thought-out purpose in view.—Howard C. Hill in the *History Teachers' Magazine.*

Notes on Arithmetic in Grades One, Two and Three

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THE work of these Primary Grades is naturally the foundation on which all subsequent work in Arithmetic is built, and, for that reason, is deserving of the most careful consideration of the teacher. The mechanical work connected with the processes of addition, subtraction, multiplication and division is here considered. From the beginning attention must be devoted to clearness, sequence, and exact oral and written expression in order to help the development of clear and logical reasoning in the children.

In *Grade One* the child's experience, supplemented by objective teaching, will furnish the basis for counting to fifty by ones, twos, threes, fours, fives and tens. The clear appreciation of the significance of "twenty", "thirty", "forty", and "fifty", as well as of "twenty-four", "thirty-seven", "fourteen", etc., is obtained by arranging the objects in groups of ten. The evil of "counting by ones" may be overcome by practice in the rapid recognition of groups of pegs, or other objects, on a smooth flat-top desk; by quick recognition of the number of letters in a word or of the number of digits in a given number.

Objective exercises will lead the children to the knowledge of certain facts connected with addition and subtraction, e. g.,

"Two pegs and three pegs are five pegs."

Two and five; two and seven; three and four; three and five; etc., all within ten.

And by arranging the objects in groups of ten an extension to facts within fifty may be made.

"Thirty-two pegs and three pegs are thirty-five pegs."

Forty-three and two; twelve and three; twenty-four and five; etc.

Applications of this method may be found in the oral solution of suitable problems:

"Mary had four books in one hand and three books in the other hand. She had seven books in her two hands."

"John had twenty-three marbles in one pocket and four marbles in another pocket. He had twenty-seven marbles in his two pockets."

"A man had seventeen horses and sold four of them. He had thirteen horses left."

Facts of multiplication and division may also be taught objectively and applications found in suitable problems. Thus:

"Two times two candies are four candies."

Two times three; two times four; two times twenty; etc.

"The teacher gave eight marbles to two boys. She gave one-half of eight marbles, to John and one-half to Will."

"John divided ten candies equally among five girls. He gave one-fifth of ten candies to each girl."

Measures such as the pint, quart, foot, yard, quart, gallon, day, school-week, etc., may be suitably introduced in this connection.

Grade Two should proceed with counting to one hundred by sixes, sevens, eights and nines.

Having laid a solid foundation, the introduction of written symbols (figure language) is by no means a difficult matter: the grouping by tens has given an opportunity to introduce 20, 30, etc., and from this other steps follow quite simply.

Twenty and four, Twenty-four—20 and 4, 24

The principle of grouping by tens makes additions of numbers whose totals exceed ten quite simple; thus, with 7 objects in one group and 6 objects in another group, move 3 objects to the 7 group, presenting the 13 objects in a 10 group and a 3 group.

Drill in addition and subtraction should be given.

Teacher—orally, "8 and 7?" "38 and 7?" etc.
Pupil—orally, "15", "45", etc.
Teacher—B.B. "43 less 8?"
Pupil—writing, "35."

Continuous addition at this stage should be confined to single columns and to totals within 100; it is well to train pupils to add up and down for purposes of checking their work.

79—3, 4, 8, 7, 6, 9, 4, 7, 5, 7, 3, 9, 7—79

In a similar way the processes of multiplication and division may be taught:—3 times 6, 2 times 7, 4 times 4, 2 times 30, 2 times 50, etc.

"A farmer had 3 ploughs at work with four horses on each plough. He had 3 times 4 horses or 12 horses at work."

"A man sold thirty pigs for which he received $90. He must have received one-thirtieth of $90 or $3 for each pig."

Grade Three work opens with the use in oral speech and writing of the numbers to one thousand, both in Arabic and Roman numerals.

There are no new addition facts, but there are extensions of the work done in Grades I and II: 200 and 300; 700 and 900; 420 and 30; 370 and 80, etc. In addition only the totals of the successive pairs of numbers should now be used by the scholar. Drill and problems should be used continuously.

"Nine bushels of oats cost $3.60. The price of the oats per bushel must have been one-ninth of $3.60 or 40 cents."

"A man offered $4200 for 70 acres of land. He was willing to pay one-seventieth of $4200 or $60 per acre for the land."

"One-seventh of 56 is 8. Two-sevenths of 56 are 16. Five-sevenths of 56 are 40," etc.

"A stick 2 feet long is two-thirds as long as a stick 3 feet long."

"One man is 6 feet tall and a second man is 5 feet tall; the first s six-fifths as tall as the second; the second is five-sixths as tall as the first," etc.

More complicated multiplication and division may also be begun in this grade.

Business Notes

We are planning to have a series of articles this year under the heading "How We Decorated Our School". We should be glad if a number of teachers who have done something in the matter of Schoolroom Decoration would write a short article for THE SCHOOL explaining what they did and how they did it. These contributions may vary in length from 500 to 1500 words and should not exceed 2000 words. In fact, many very interesting articles are contained in one or two paragraphs.

We should like to have several accounts of the means employed in decorating High Schools, and Public Schools in towns and cities, but we are also anxious to have articles regarding the decoration of rural Public Schools. If you have secured pictures for your school, will you not tell others how you managed it so that they may do the same?

For information about pictures for Schools consult our advertising pages. If we can help you further in your selection, write us.

If you are importing pictures for school purposes refer to section 696 of the Customs Regulations.

The advertising pages of THE SCHOOL present opportunities to save money and to make your purchases with greater convenience. One who wishes to keep abreast of the newest and the best in school or personal requirements cannot slight the advertising sections. Besides this, advertising news is interesting. You may not wish to purchase any particular article now, but if you read about it and about the place where it may be obtained, you can purchase more intelligently when you do require it.

There is in our advertising news much real information about books, school equipment, colleges, pictures, use and care of money, personal needs, athletic necessities, and means of obtaining higher education. These pages repay careful perusal.

Have you a new idea? Or a new device? Have you tried an experiment in teaching or in school management? Why not pass it on?

Hints for the Library

Four-Footed Friends, by Mrs. Huntington Smith. Cloth, 172 pages. 50 cents. Ginn & Co., Boston. "Truth embodied in a tale will enter in at lowly doors", says Tennyson. *Kindness*, with special emphasis given to Kindness to animals, is the central truth embodied in the 23 little stories of this book.

As President of the Animal Rescue League of Boston, Mrs. Smith is naturally able to give to her writings many of the essential ear-marks of good stories. But there is an apparent over-anxiety due no doubt to her love and zeal for her daily work that the reader will miss the moral This over-anxiety has caused her to leave the moral bald and bare, void of that artistic weird embodiment which makes it live on in the life of the child.

F. E. C.

Games, Seat Work and Sense Training Exercises, by M. Adelaide Holton and Eugenia Kimball. Cloth, 124 pages. 40 cents. A. Flanagan Co., Chicago. Book contains 45 schoolroom games, 71 devices for seat-work, 82 sense-training exercises and 90 memory gems suited to primary grade classes. This book would be especially helpful to those who experience difficulty in obtaining material along the above lines but is deserving of a place in the library of any primary teacher. F. E. C.

Practical and Applied Arithmetic. by W. B. Bavin. Cloth, 134 pages. 1*s*. Edward Arnold, London, Eng. "If a child's knowledge reaches to a solid foundation in sense training, the floods of time will beat in vain upon that knowledge. Other things will pass away, but that will remain."—Francis W. Parker.

The author of the above little book has endeavoured to apply this truth in the field of elementary mathematics. By various kinds of sense-training exercises the children are lead to discover and apply the simplest mathematical truths for themselves.

For the Canadian teacher the chief value of the book lies in the emphasis which it gives to this fundamental educational truth.

F. E. C.

Leather Work, by Adelaide Mickel. This is an excellent work in a very interesting and valuable department of the Manual Arts. As stated in the preface the book is intended to be of practical assistance to teachers and students in acquiring the technique of the various kinds of leather work. A chapter or section is given to each of the following: Equipment, Flat Modeling, Embossing or Repoussé, Carved Leather, Cut-Work, and How to Colour or Stain Leather. The book is primarily practical, and its methods are so clearly and yet so briefly stated that

every step is plain. It is well illustrated with working drawings and photographs of objects suited to the various grades of the elementary and High School. Paper covers, 54 pp. 75 cents. The Manual Arts Press, Peoria, Ill. A. N. S.

Light Woodwork, by W. G. Alderton and J. T. Baily. The authors have in this work presented a course of woodwork that can be carried on in the ordinary class-room. The aim has been to correlate the handwork with Arithmetic, Drawing and Composition. A large number of exercises and models are given in which methods and mental activity are constantly kept in view. The work will assist greatly in the introduction of profitable exercises in wood into the schools of the rural districts. The book is well illustrated. Cloth, 128 pages. 2*s.* 6*d.* Edward Arnold, London, W., 41 and 43 Maddox Street. A. N. S.

Descriptive Geometry, by H. W. Miller, M.E. The work under review is written by a college graduate who, after graduation, applied his education in the trade of boilermaking. The result is a work written with a full knowledge of the subject and leading to a set of principles such as every efficient workman must understand if he would be a success in any engineering profession. The problems are clearly stated, are carefully analysed, the constructions fully worked out and the conclusions briefly summarised. The work is not for a beginner, but for one who has some knowledge of Descriptive Geometry and desires a thorough grasp of the subject. The printing and binding are excellent; by the use of heavy type and italics the student is greatly assisted in keeping important points prominent. Leather, 150 pages. $1.50. Manual Arts Press. A. N. S.

The Story of Canada, by E. L. Marsh. Thomas Nelson & Sons, London. 208 pages. Price 35 cents. This book is just what its title indicates—a story. It gives Canadian History in good form for Third Book Grades. If you feel that your classes are finding the History of their own country, as taught from the text, a little "stale", procure a few copies of this book for your School Library and let them read it; or use it in preparing your own lessons. W. J. D.

The Reformation and the Renaissance, and *Imperialism and Mr. Gladstone*. G. Bell & Sons, London. Price 1*s.* each. We have received these two additional volumes of the series of English History Source Books, and they are quite up to the standard of those reviewed in a former issue. Good judgment is shown in the selection of extracts. For the most part, they are personal, or descriptive, or rhetorical, or even strongly partisan. The books of this series supply in a convenient form material which is indispensable to the teacher of History.

Notes and News

Mr. Nelson D. Morris has resigned his position as Principal of the Coldwater Continuation School to take a course in the University of Toronto. His successor at Coldwater is Mr. Fred T. Schooley, formerly Principal of Tavistock Continuation School.

At the Lennox and Addington Teachers' Institute held in Napanee, October 2nd and 3rd, the principal speakers were Dr. Jas. L. Hughes, Toronto, and Miss MacRae, teacher of Art in the Peterboro' Normal School. The officers elected for next year were: President, Miss Dickey, Napanee Coll. Inst.; Vice-Pres., Mr. Wm. MacKay, Napanee Public School; Sec'y-Treas., Miss Etta Harrison, Napanee P.S.

The following appointments have been made to the staff of St. Mary's Collegiate Institute: Principal, Mr. W. J. Wright, M.A., formerly Principal of Forest High School; Moderns and History, Miss A. Ward, M.A., formerly of Galt; Mathematics, Mr. W. R. Bocking, M.A., of St. Catharines; Commercial Work and Art, Mrs. J. E. McGregor of Smith's Falls; Junior Work, Miss E. V. Rogers of Tillsonburg.

Miss Ethel M. Thorpe who taught last year in Midland has joined the staff of the Saskatoon Public Schools.

Queen Victoria School — Queen Alexandra School

Belleville's New Schools

We are glad to publish views of Belleville's new Public Schools. These buildings are modern in every respect. The lighting and heating systems are pronounced perfect. There is in each an Assembly Room, a Principal's office, and a teachers' room. The staffs of these schools are as follows: Queen Alexandra—Principal, Mr. M. W. Mott; Assistant Principal, Mr. A. E. Thrasher; Miss M. Fleming, Miss A. Caskey,

Miss L. Craig, Miss F. Allan, Miss F. Stafford, Miss L. Aull, and Miss A. Mackay. Queen Victoria—Principal, Mr. A. C. Wilkin; Assistant Principal, Mr. F. I. Snider; Miss J. Bruce, Miss R. Vincent, Miss M. Mackintosh, Miss M. Drewry, Miss M. E. Mills, Miss E. Moore, Miss V. Handley, Miss L. Drummond, Miss M. Northcott.

Miss Agnes Fraser of Ingersoll has been appointed to the staff of the Guelph Public Schools.

Mr. J. Roy Harris is now Principal of Stayner Continuation School.

Mr. G. F. Rogers, B.A., of North Bay has been appointed Principal of London Collegiate Institute. His duties there commence November 1st.

Miss Ella Owen of Owen Sound has been appointed Primary Teacher in Merlin.

Miss M. Callaghan of Plantagenet has accepted a position in Rockland High School.

Mr. W. K. Foucar, M.A., formerly Principal of Almonte High School, has accepted a similar position in Mitchell.

Mr. G. A. Miller, B.A., of Chatham is now Principal of Seaforth Collegiate Institute.

Miss Florence Flanagan of Paris will teach Science this year in Elora High School.

Miss Helen Brown of Windsor has charge of the Junior room in South Woodslee.

Miss Fritz of Guelph is now Commercial Specialist in Renfrew Collegiate Institute.

Miss Gladys Wright of Beeton has received an appointment in Beaverton High School.

Mr. Chas. H. Arnold of Grimsby is now Principal of the school in North Cobalt.

Miss Irene Hayes of Phelpston, Miss Mildred Lawson of Toronto, and Miss Nellie Roberts of Victoria Harbour have been appointed to the staff of the Victoria Harbour Public School.

Mr. A. R. McRitchie, B.A., of Caledonia is teaching Mathematics and Science in Arthur High School this year.

Miss Minerva E. Stothers, B.A., of Ottawa has accepted a position in Kenora High School.

Her many friends will regret to learn of the sudden death of Miss E. A. Armstrong, who taught for many years in Park School, Toronto. She had gone to Vancouver to spend the summer vacation. She was a sister of Mr. W. G. Armstrong, M.A., recently of Ottawa, but now of King Edward High School, Vancouver.

The Annual Convention and School Garden Exhibition of the Teachers' Association of the Weyburn Inspectorate held in Midale, September 18th and 19th, proved most successful, interesting and inspiring.

Miss Helen Ford, B.A., of Goderich has accepted the position of Principal of Newcastle High School,

Miss Margaret Stewart of Hespeler has been appointed to the staff of the Bracebridge Continuation School.

Miss Maud S. McDonald of Toronto has been appointed Teacher of Household Science in Berlin Collegiate Institute.

Miss Bertha Mallory, formerly of Picton Collegiate Institute, will teach Commercial work in Berlin Collegiate Institute this year.

On Friday evening, August 15th, the new Public Library in Moose Jaw was formally opened. The cost of the building was $100,000. To Mr. J. W. Sifton, Superintendent of Public Schools and chairman of the Library Board, much credit is due for the successful completion and equipment of this magnificent edifice.

Mr. W. R. Cavanaugh, of the class of 1912-13 in the Faculty of Education, Toronto, has been appointed to the staff of the Myrtle Street Public School, St. Thomas.

Mr. J. W. Cantelon, M.A., formerly Principal of Caledonia High School, has accepted the position of Principal of the High School at Iroquois.

One of the most interesting periodicals which comes to the office of THE SCHOOL is the *Canadian Statesman* of Bowmanville. Editor James was a teacher for ten years before going into newspaper work, and his interest in educational matters continues unabated. His paper always contains a good deal of school news. In a recent issue he had an interesting editorial on the subject of Spelling in which he tells us that "writers and spellers are born, not made". The *Daily Ontario* of Belleville joins with the *Statesman* in the protest against keeping a pupil back in his classes on account of failure in Spelling. We feel sure that both of these editors will be interested in Professor Sandiford's article in the previous issue.

At the International Shorthand Speed Contest held at Chicago, August 20, 1913, under the auspices of the National Shorthand Reporters' Association Mr. Nathan Behrin, an Isaac Pitman writer, won for the third time and permanently, the "Shorthand Writer" Cup, with an average accuracy of 98.3% in the 200, 240 and 280 words per minute tests, breaking all previous records for accuracy. Only one other contestant qualified—writing Pitmanic Shorthand—with a percentage of accuracy of 91.11. Mr. Behrin's record for accuracy in 1912 was 97.01.

MANITOBA

Messrs. W. Van Dusen and John Peach, Principals of Hamiota and Swan River respectively, have been appointed to Inspectorates in Manitoba.

Messrs. H. H. McIntosh, B.A., and H. W. Huntley, M.A., Principals of Minnedosa amd Melita respectively, have been appointed to positions on the teaching staff of Winnipeg.

Mr. S. T. Newton, for many years teacher of Manual Training in the public schools of Winnipeg, has been promoted to the position of Superintendent of Technical work in the Kelvin Technical High School.

Mr. S. Carson Lee, B.A., Principal of Portage la Prairie Collegiate Institute, has accepted the position of Professor of Physics in the Manitoba Agricultural College; his position will be filled by Mr. C. C. Arthur, B.A., Principal of the Collegiate Institute, Cobourg, Ontario.

The Summer School of Science and Handicrafts conducted by the Department of Education, Manitoba, is becoming exceedingly popular. About 100 teachers from various schools of the province availed themselves of one of its courses during the past vacation.

The School Masters' Club of Winnipeg will hold its first meeting for this term on September 19th; Banquet, Election of Officers, Introduction of New Members, Music, Address.

Mr. T. A. Neelin, M.A., who has recently completed a post-graduate course at Cornell University, succeeds Mr. W. Van Dusen as principal of the Hamiota Intermediate School.

Mr. Wm. Emsall, after four years' successful work in the Westerham School, has resigned. The *Western School Journal* writes: "After forty-five years of faithful service as teacher, Mr. Emsall retires this year, rich in the memories of a useful career of loving service among his fellow-beings."

The Summer School of Science and Handicrafts, held during July and August, had almost one hundred teachers in attendance.

NEW BRUNSWICK

The Provincial Normal School opened at Fredericton, N.B., for the year on September 2nd, with an enrolment of 301. Of these 66 entered for Class I, 152 for Class II, and 83 for Class III. The Candidates for Class III include 21 in the French Department. Of the above there were 15 males for Class I, 14 for Class II and 4 for Class III.

Mr. F. A. Good, formerly of the Fredericton High School Staff, assumed charge of the Nature Study department of the Normal School at the opening of the present session, and Mr. J. Roland Murray succeeded Miss Alethea Wathen in the Manual Training department, the latter having accepted a position in the Manual Training department of the Calgary Schools.

The University of New Brunswick opened for the year's work on September 22nd, with 151 students, of whom 30 were in the Senior, 32 in the Junior, 51 in the Sophomore and 38 in the Freshman Class.

Two new professors entered upon their duties at the beginning of the present academic year. W. L. McDonald, B.A., Ph.D., late of the Toronto University staff, succeeded Chas. M. Carson, B.A., Ph.D., who resigned to accept an important and lucrative position in the United States, and Adam Cameron, B.A., B.Sc., succeeded Robert K. Gordon, B.A., who accepted a position on the professorial staff o the University of Alberta, Edmonton, Alta.

The County Teachers' Institute of York, Queens and Sunbury Counties was held at Fredericton, N.B., on September 18th and 19th. Addresses were made at the opening by Mayor Hooper, W. S. Carter, LL.D., Chief Superintendent, and others. Papers were read and discussed on "Agriculture in Schools", J. B. Daggett, Secretary of Agriculture; "School Hygiene", H. H. Hagerman, M.A.; also "Talks on Teaching G.C.M. by Long Division", by B. C. Foster, M.A., LL.D.; and "A Device in Teaching Long Division", M. Annie Harvey; together with an address on "Physical Training", by A. S. McFarlane, M.A., and one on "Forestry", by Prof. R. B. Miller of the University of New Brunswick. About 200 teachers were in attendance and the discussions were interesting and instructive.

Restigouche County Teachers' Institute convened at Campbellton, N.B., on September 25th and 26th. There were papers on "How to teach children to solve Arithmetical problems", by Miss K. McNair; "Talks for Beginners", by Mr. L. D. Jones; "Geography", by Mr. Geo. King; and "Best Methods of Teaching Spelling". Addresses were given during the sessions on "Manual Training", by Fletcher Peacock, B.A., and "Nature Work and Agriculture", by R. P. Steeves, Director of Elementary Agricultural Education. A public meeting on the evening of the 25th was addressed by Mayor Murray of Campbellton; W. S. Carter, LL.D., Superintendent of Education; G. W. Mersereau, Inspector of Schools, and others.

NOVA SCOTIA

The Provincial Normal College, Truro, opened September 25th, with nearly 200 in attendance. Another class of about one hundred will enter in February.

Mr. Harry Lockhart, B.A., is teacher of Junior Science in Truro Academy. His predecessor, Mr. S. B. Trerice, B.A., has accepted a position in Saskatchewan.

Dr. A. H. MacKay, Superintendent of Education, attended the meetings of the Dominion Educational Association in Ottawa in August. He also attended the Hygiene Conference at Buffalo.

Mr. Harrison F. Lewis is Principal of Antigonish Public Schools.

ARTISTIC PICTURES

The following pictures have been selected to meet the list suggested by the

Ontario Education Department in Appendix C

"Regulations and Courses of Study of the High Schools and Collegiate Institutes," 1913.

These pictures represent some of the finest art in the world and are faithful reproductions of the original paintings.

The prices, which will be found within the means of every school, are for the prints only, but we shall be pleased to execute any framing at moderate prices.

Spring, by Mauve.

The Cleaners, by Millet.

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P4995	The Concert.....by Ter Borch,	9×12 ins.....	.75
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P4747	The Age of Innocence.....by Reynolds,	6×8 ins.....	.75
P5228	The Cornfield.....by Constable,	16×20 ins.....	.75
P3118	The Lake.....by Corot,	22×28 ins.....	1.00
E134	Shoeing the Bay Mare.....by Landseer	15×20 ins.....	3.00
P1419	A Reading from Homer.....by Alma-Tadema,	9×17 ins.....	1.00

When ordering please quote No. preceding the name of picture, and mail your orders to **DEPT. A.**

The GEO. M. HENDRY CO., Limited

Canadian School Supplies

215-219 Victoria Street - - Toronto, Ont.

Mr. Charles R. Dyas, B.A., has been appointed to a good position in the Glace Bay Schools.

Mrs. Edna Harper, teacher of Singing in the Provincial Normal College, attended the Summer session at Columbia University, New York.

UNITED STATES

Philadelphia provides free eyeglasses for nearly 2,500 school children every year.

Required home study has been abolished in the schools of Sacramento, Cal.

About $15,000 is earned annually by the boys in the co-operative industrial course in the High School at Fitchburg, Mass.

After 10 years of service a teacher in Schenectady, N.Y., may obtain a year's leave of absence for study or travel abroad, receiving one-third payment of salary.

Medical inspection is a business proposition. In a town with 250 children, it is said, for instance, there would be an annual saving of $5,250 if by thorough medical inspection the curable physical defects that handicap school children could be remedied.

School officials in Beverly, Mass., recently calculated the money gain for their pupils in vocational education. They found that an expenditure of $800 per boy in industrial training had raised the capitalisation of the boy's economic value from $6,000 to $15,000 or $18,000.

"We are destroying the eyes of a large number of school children by the burden of continuous near work to which they are subjected," says Dr. F. Park Lewis, of Buffalo. He suggests as a remedy, in addition to the use of eyeglasses, reduction in the amount of work dependent directly upon the printed page. "Let us have more thinking and fewer books," he declares.

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AWARDED FOUR GOLD MEDALS

A Helping Hand.

The Perry Pictures Company

Dept. 98, Malden, Mass.

From painting by Blashfield, 1848.

CHRISTMAS CHIMES.

[Reproduced by Special Permission of the Perry Picture Co.]

TO spend too much time in studies is sloth; to use them too much for ornament is affectation; to make judgment wholly by their rules is the humour of a scholar: they perfect nature and are perfected by experience: for natural abilities are like natural plants that need pruning by study; and studies themselves do give forth directions too much at large except they be bounded by experience.

. . . . . .

Reading maketh a full man; conference a ready man; writing an exact man; and, therefore, if a man write little he had need have a great memory; if he confer little, he had need have a present wit; and if he read little, he had need have much cunning to seem to know that he doth not.

BACON — *Of Studies.*

The School

"Recti cultus pectora roborant"

Editorial Notes

The League of Empire.—A reference in October in these columns to the Imperial Conference of Teachers' Associations to be held in Toronto in 1916 has prompted an inquiry as to the League of Empire. As the Conference is now an assured fact and as it will be held under the auspices of the League of Empire it is fitting that the teachers of Canada should know something about the organisation and work of the League.

The League was organised in 1901. The Boer war emphasised the need of unity in interests and sympathies throughout the Empire and the League was founded to foster that unity. From the first it focussed its attention upon the schools. The schools could spread "that wider patriotism on which the unity of the Empire must ultimately depend".

The first work of the League was to organise the interchange of correspondence between school children throughout the Empire. There are now more than a quarter million members of this correspondence branch of the League. In 1903 it began to affiliate schools with one another. By this movement "hundreds of thousands of children in every part of the British Dominions have been brought into close relation with one another in a great variety of congenial interests". In 1907 the League succeeded in convening the first Conference of the Education Departments of the Empire at London. In the same year the League devised and applied a scheme to facilitate the migration of teachers for purposes of study. Hundreds of teachers have taken advantage of this scheme. In 1909 the League undertook to popularise Empire Day in England. Out of its efforts has grown a monster annual parade of London school children in Hyde Park. In 1912 it convened at London the first Imperial Conference of Teachers' Associations. Among the six hundred delegates to attend, Canada was fully represented. Out of this Conference came the generous gift, by an Australian philanthropist, of a London club-house for the use of members of the League and of teachers especially from Overseas.

The present-day activities of the League are varied. It furnishes information and introductions to teachers emigrating, or to teachers visiting different parts of the Empire, and for those who visit England it organises trips to interesting houses and historical scenes. It collects and circulates throughout the Empire information upon educational subjects by organising exhibitions and lectures upon Imperial topics, conducting Empire Day essay competitions open to the schools of the Empire, and issuing school books, especially histories and geographies, that are imperial in content rather than local. It has also undertaken to prepare and interchange slides and films illustrative of the history, geography and industrial and social life of the different parts of the Empire. And quite recently it organised the Imperial Union of Teachers in preparation for the Imperial Conference of Teachers' Associations in Toronto in 1916.

The organisation of the League is not elaborate. The parent society has central offices and a secretary in London, England. Lord Strathcona and Lord Tennyson are its past-presidents, Sir Frederick Pollock is its president. A distinguished list of vice-presidents represents all parts of the Empire. The Federal or Executive Council meets in London and includes a large number of prominent educationists like Professor Bury, Professor Egerton, Professor Gardner, Professor Mahaffy and representatives of the various types of British schools. Branches of the League are now to be found in all parts of the Empire. Of the Canadian branch Principal Hutton of University College is president; Colonel Denison and Dr. Hughes vice-presidents, and Mrs. H. S. Strathy, Toronto, honorary secretary, while Mr. H. J. Baker, Toronto, is the honorary secretary for Ontario. The Governor-General, the Lieutenant-Governors, the Premiers, the Ministers of Education, the Superintendents of Education, and the Presidents of the Universities are among the members of the Canadian branch of the League.

Applications.—A correspondent protests against some of the claims advanced by applicants for High School posts. Many, he says, urge the claim that the High School inspector has always graded them in Class I. or Class II., and they urge it while concealing the fact that the inspector's grading is based upon many things besides the teacher's work in the class-room. Very many, he continues, advance the plea, "Not a student failed last year in my subjects". "A most vicious plea!" exclaims our correspondent.

And then he proceeds to clear the school boards of all blame in the matter of this last plea. They look for, must look for, some tangible evidence of merit in the applicant. Personal applications are still rare despite the growing faith in such a method. To their everlasting credit

be it said, applicants now rarely obtrude their politics or creeds or kinships upon the boards. From what source then must the tangible evidence come if not from the successes or failures of the public examinations? Indeed, by our words and deeds we teachers have ourselves taught boards to demand success in examinations as proofs of our efficiency. When the opportunity came to us to minimise the influence of those examinations and to reduce their numbers did we not demur and ask for more? What wonder then if boards take us at our own estimate?

"And yet," our correspondent concludes, "the plea of success in the examinations is a very vicious plea, embodying a very vicious ideal!"

Book Reviews

Mediaeval England: A Framework of English History. G. Bell & Sons, London. Price 1*s*. This is a book of outlines, and is not intended as a substitute for reading. The tendencies of each period are given in convenient form. By enabling the student to see the significance of the movements in the different reigns and periods, it should assist him greatly in his reading of History.

English History from Original Sources. Adam and Charles Black, London. Price 2*d*. each. The volume received covers the century from 1715-1815, and is arranged in two parts. The books of this series are intended to be used as supplementary reading in History. The extracts are from contemporary authors, or are themselves contemporary documents and illustrate fairly and vividly the really important events of the period. The illustrations and the maps are excellent.

History of England, by Allen C. Thomas. Cloth, 650 pages. Maps and illustrations. $1.50. D. C. Heath & Co., Boston. In this book special prominence is given to the human element in History. The rise of the common people is traced with clearness and force. The growth of parliament, the decreasing power of the nobles, the influence of great personages, the vast social and economic changes, the development of the British Empire, the problems of the present, are set forth with exceptional interest and charm. The story ends with the events of January 1913, and in an appendix is given a brief History of Continental Europe to 1648. The latter is an exceedingly valuable addition, showing the intimate relation between English and European History from the beginning.

The Function of a Faculty of Education

Extracts from the Inaugural Address of H. T. J. Coleman, B.A., Ph.D., Dean of the Faculty of Education, Queen's University

IN the first place a Faculty of Education is not a sublimated Normal School, a Normal School which has strayed into, or been foisted into University company. I have no thought of saying anything in disparagement of Normal Schools in general, or of our Ontario Normal Schools in particular. They have done and are doing faithful work, work which will compare favourably, in point of public service, with that of more pretentious institutions. But that work is of necessity elementary in scope and practical in outlook. On the other hand the Faculty of Education deals with students many of whom are of advanced scholarship and of quite large experience with life. While it does not overlook the practical or even the mechanical aspects of the art of education, it centres its attention upon the inculcation of a proper pride in the teacher's work through a study of the possibilities latent in the school as an agency of social progress.

In the second place a Faculty of Education is not a place where prospective schoolmasters and schoolmistresses are given a complete mastery of every subject which they may conceivably be called upon to teach during their later professional careers. The instruction it is called upon to furnish is not the last pint or the last gallon intended to fill to the brim reservoirs of knowledge already reasonably full. Whatever it may do incidentally in this connection, it finds its chief purpose on the practical side in helping students to the organisation of such knowledge as they already possess (or may readily obtain on their own account) with a view to its use in the class-room. There is a heresy which still finds some vogue in academic circles—"The last infirmity of certain noble minds", if you please, but still an infirmity—the heresy which asserts that if a man knows a subject he can teach it. I do not know whether members of my audience have at any time in their lives met with any concrete refutations of this maxim—with men who manifestly knew their subjects but who manifestly could not teach them, but I do know this, that the right of a Faculty of Education to exist depends upon the refutation of this same heresy, not by the process of simple denial but by the assertion and the demonstration of a truth which is, in certain respects, its contrary, viz., that "if a man can teach a subject he knows it". A critic of our educational system once said, that the Faculty of Education is a fifth wheel to the educational coach.

Now while I do not at all believe that this statement, taken as it was intended, is true, I do feel that with a somewhat different (though perfectly legitimate) interpretation it furnishes a very good definition of the goal towards which the Queen's Faculty of Education may legitimately strive. For the coach of the twentieth century is the automobile. Even University Professors and University students have been known to ride in such coaches and some have been known to own them. And the fifth wheel of the automobile is as essential as the other four, for it is the steering wheel, the wheel which is responsible (so, at least, I gather from my limited experience in that connection) both for direction and for progress.

A brilliant Scottish writer in a recent work on the colleges of the United States comments on the widespread interest in education which is evident in that country and a certain lack of clear thinking and concerted effort in educational matters which he finds there also. "They are by no means certain where they are going", he remarks, "but they are bound to get there." There are reasons for believing that many of the conditions, social and otherwise, which are responsible for this confusion of thought and dissipation of energy in the United States, are present in Canada also. With all our faith in popular education in all its myriad forms, we are by no means unanimous as to the real purpose of it all, and certainly were this purpose to reveal itself we would still disagree as to the means by which it should be realised.

Surely, then, there is a useful place for an institution which seeks to co-ordinate and to make generally available those sources of light, leading and inspiration which the modern University has in its keeping. Such an institution the Faculty of Education in Queen's University has, I believe, been in the past. Is it too much to hope that such it may be in even greater measure in the future?

Teacher—Away back in 1776, Washington was the nation's champion.

Earlie—Aw! Whatchu giving us? The Washington team never won the championship!

"Suppose, Bessie"—the teacher was trying to explain the meaning of "recuperate"—"suppose your papa has worked very hard all day; he is tired and worn out, isn't he?"

"Yes, ma'am."

"Then when night comes and work is over for the day, what does he do?"

"Oh!" replied Bessie, "that's just what mother wants to know."—*Sunshine Bulletin.*

Rural School Problems

S. SILCOX, B.A., D.Paed.
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THE length of the recitation period in the rural school is necessarily shorter than in the graded urban school. Many teachers in their attempt to hear each class recite in nearly every subject daily make these periods unnecessarily short. In general, it is better to hear fewer classes and to give to each class a longer period than to attempt to hear all for a few minutes only. The rural teacher is advised to set a minimum time for the recitation period in each class and to determine the number of lessons accordingly. The period for primary classes should not be less than eight minutes and for advanced classes fifteen minutes. If the periods are shorter than these, much effort is wasted and bad habits of study are sure to be formed.

With the minimum fixed at these periods of time, it will be necessary to cultivate the habit of conciseness. A full development of a topic will be impossible. The aim should be to give the members of the class a good start so that the lesson can be followed up at the seats in their study period. Indeed, the *preparation* for the recitation should be done at the seats so that the full recitation period can be utilised for the presentation of new material. Thus the principal modifications necessary in rural school teaching are (*a*) the step of preparation taken at the seats, (*b*) the step of development shortened, (*c*) the review and application taken at the seats. When pupils are trained to depend upon themselves in this way, power is developed. *The application of knowledge is power.*

The Use of the School Building by the Community.—If asked to express in a word the distinction of the new education from the old, I should say "Interest". Children are learning to like their schools, their teachers, their work. This was forcibly illustrated a year or two ago by two boys, nine and ten years of age respectively, urging their mother, who wished to prolong their summer visit, to return home in order to be present at the opening of their school. The mother remarked to me, "My goodness, when I was their age, school was the last place I ever wanted to go to, but these boys actually want to go to school". That is the secret of learning, *to want to*. A few summers ago the tussock moth was very abundant in East Hamilton, and about the end of July the trunks of the trees along the streets were covered with the brilliantly marked larvae of this moth. I stopped a boy of about ten years of age

in front of a tree on which a dozen larvae were resting or crawling at the height of his line of vision and asked him what they were. "Don't know." "Did you ever see them before?" "Nope." "Why not?" "'Cause I didn't want to." The answer was psychologically correct and needs to be pondered upon by every teacher. The first step in the learning process is to develop the "want-to-know" spirit, and this spirit is the outcome of liking that which is to be learned. But while we have made the teacher and the subject-matter more attractive, we have left the school building in its old, barren, forbidding surroundings, a spot to be avoided before nine or after four. The next greatest educational opportunity is to make the schoolhouse the social centre of the community. There should be Saturday picnics, Sunday gatherings, week-night entertainments, reading circles, singing schools, spelling matches, and business gatherings. The first step in this direction is to make the schoolhouse a bright, clean, attractive place day and night. How many such schoolhouses are there in Ontario? How many of these are used once a month even throughout the year? What teacher will take one step during the year 1913-14 and organise a literary society which will meet at the schoolhouse weekly or fortnightly?

Attendance.—Every teacher and every trustee should ask two questions: (1) Is every possible pupil enrolled? (2) Is every enrolled pupil attending every day possible? We say that we believe in education. Then we see children of school age employed during school hours and play the part of the men in the Bible story who "passed by on the other side". If it is true in many sections that only seventy-five per cent. of children of school age are actually enrolled *throughout the year*, and that, as our annual reports show, the average attendance is only sixty to seventy per cent. of the enrolment, our schools are working at about fifty per cent. of their maximum efficiency owing to poor attendance alone. Add to this the loss due to inefficient teaching and the actual results are appalling. If any business were run in the same wasteful way, it would not weather the financial storms for one year. The first step towards increasing productiveness in our schools is to improve the attendance. This can be done best by personal consultation with the parents, but the enforcement of compulsory school attendance by a truant officer is often the only means of ensuring success.

If we had sanitary buildings, attractive grounds, and regular attendance, we should still be badly handicapped by the present custom of almost annual changes in our rural school teachers. It is not unusual to find forty changes among one hundred teachers. Indeed, in some rural districts the majority of the teachers change every year. Even in the rural schools, affiliated with our Normal Schools, it is not easy to

keep the staffs intact for one year, some teachers leaving at Christmas, some at Easter, and many in June. It is quite unusual to find a teacher remaining more than two years in these schools although the Department gives a special grant to the teacher and most of them enjoy the visits of the Normal students as it breaks the monotony of the rural quiet.

The remedy for these frequent changes is not entirely a matter of salary. More frequently it is due to several other causes, among which are dissatisfaction with conditions, desire to change and the lure of the city often associated with a lower salary. The remedy lies with the teachers themselves, who need to consider the interests of their schools as well as their own interests. Let our rural school teachers pride themselves upon staying three years in a school instead of being successful in securing a new school. Let them adopt a higher ethical standard than that usually observed and refuse to leave a school except at the end of the school year in June, unless the circumstances fully justify a change.

In this connection a word may be said about records, which, if well kept, will help to lessen the evils of frequent changes. Most teachers record only the attendance and the examination results. While these are essential, it is much more essential that a teacher should keep in her school a complete record of the work done day by day. Such a record is of value to the teacher who makes it, but is of inestimable value to a teacher who has to take up another's work at Christmas, at Easter or at any other date in the school year. Even to the teacher

Class IV.—Syllabus of Work for the First Term, ending Dec., 1910.	Class Teacher's Record of Work Done.		
	Week ending Sept. 16th.	Week ending Sept. 23rd.	Week ending Sept. 30th.
Recitation.	The Retired Cat, ll. 1-10.	The Merchant of Venice, Introd.	Merchant of Venice, III. 2, ll. 150-158.
Writing: 1. Word building. 2. Transcription and dictation. 3. Composition. 4. Copy-books.	Copy writing, Composition on "How I spent my Holidays."	Dictation, Comp. on "The Month of September."	Dictation, Composition on "A Day with the Ancient Britons."
Arithmetic.	Reduction, Square Measure.	Reduction, sq. ins. to sq. yds.	Reduction, Addition and Subtraction Sq. Measure.
Mental Arithmetic.	Questions on Rules taken.	Questions on Rules taken.	Questions on Rules taken.

who takes charge of a school at the beginning of the school year a good record of the previous year's work is almost a necessity.

The form that such a record shall take is a matter of choice for the individual teacher, until some standard form is devised and introduced in our schools. The best forms in use in England provide for a record of each week's work. One of these which came to my hand recently contains a column for the subjects of study and a column for each week's work throughout the year. Thus part of the first page of this record filled in by a teacher, is as shown on preceding page. Other forms may be used according to the conditions under which the teacher is working. *Careful records are necessary* and rural school teachers and all others are urged to keep them.

Supervision.—Fortunately there is permanency in our supervising staff, so that to some degree the evils of frequent changes of our teachers may be overcome by careful supervision. As this is strictly a Departmental question we can only say that the present movement to lessen the number of teachers under each inspector is manifestly in the right direction as it enables the inspector to give assistance where it is needed and also enables him to really know his staff of teachers. The present tendency of the trustees to look to the inspector to choose the teacher is also a hopeful sign of improvement in the teaching staff. The active co-operation of the inspector with his teachers is one of the encouraging features of present day education. The role of helper marks a forward movement from the former role of critic. Expert supervision will overcome many adverse conditions.

Administration.—The time has come when the present small school section board of three trustees should be replaced by a township board or even a county board. As an American writer says, "The district system no doubt once rendered a useful service. . . . As a system of school management it is unadapted to the business or the educational needs of the present or of the future; it is inefficient, inconsistent, unprogressive and expensive; it leads to the multiplication of small and poor schools, and to the building of an unnecessary number of small and cheap schoolhouses, and when population has increased sufficiently to warrant consolidation, the natural envy, jealousy and ultra-conservatism of the different districts stand as a block in the road of educational progress. It has been condemned generally by school officials for forty years, and the chief reason for its extensive retention is that the people in many states have never known any other system."

Whether these remarks are true of Ontario or not, I shall leave others to judge. It seems unreasonable and quite unnecessary for a

township containing twenty schools with not more than twenty-five or thirty teachers to elect *sixty* trustees to look after the business, when an ordinary city in which a hundred teachers are employed finds a school board of nine or ten members quite sufficient. Where the number of employers exceeds the number of employees the latter must be seriously handicapped. Without doubt, the education of a whole county could be more economically managed by a county board and the teacher of the district school would find her lot less subject to petty interference.

Suggestions for the Class-room

A History Device.—After having covered the period of Discovery and Exploration in American history, I combine my seventh and eighth grades for the next recitation period which is devoted to oral and blackboard work.

A pupil is asked to place a date upon the blackboard, and the first child ready to give the event in connection with this date is next at the board and the work continues in this way. If at any time the children at their seats are unable to answer, the event is given by the teacher and the next date placed on the board by her.

This arouses interest and enthusiasm and the two grades vie with each other in the work of remembering important events with dates.

We do this with each completed period in history and review dates of previous ones.—Mrs. S. W. Persson in *School Education.*

The Arithmetic Drill—Here is an arithmetic drill for the multiplication tables which is always a delight to the children. Draw a ladder of twelve rungs, begin at the bottom and number from one to twelve; then draw a small house and call it the "hospital". Use any multiplier up to thirteen. If the child stumbles and falls (makes a mistake) in climbing up the ladder he is injured and must go to the "hospital" (write child's name inside the house). There he must stay until he climbs to the top. The children work hard to be able to leave the "hospital" next day.—Laura A. Powell in *Normal Instructor.*

The Face of the Clock.—A clock face to use in teaching children to tell time may be made from heavy pasteboard about twenty-seven inches long by eighteen inches wide. Make a circle eighteen inches in diameter and place the Roman numerals in the circle as they look on the face of a clock. Make the hands of heavy pasteboard. Colour numerals and hands with black crayon. Fasten the hands on the face with a stove bolt. When the hands work loose, they can be tightened by screwing the tap. A clock face of this kind can be hung on the wall.—*Primary Plans.*

Devices in Teaching and Testing Geography

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IN the days of the "Little Red Schoolhouse", the study of geography was one in which the memory was the chief mental activity involved and for which the map and the printed book seemed the only necessary materials in the hands of both teacher and pupil. Its aim seemed to be to impart to the child a meagre knowledge of the physical conditions of this world of ours and to have him memorise lists of names of countries and their capitals, counties and county towns, products, imports and exports.

To-day the teaching profession realises that geography is one of the live subjects on the curriculum, in the study of which much valuable information of both past and present is gained, the mental faculties are given wide scope for development and much pleasure in living is added as a result. A broadened idea of the importance of this subject naturally gives rise to many ways and means, hitherto somewhat neglected, and to the realisation of the fact that the well-directed self-activity of the child is one of the essential factors both in the actual acquisition of knowledge and in the gaining and retaining of interest and attention on which so much depends.

The following devices in teaching and testing geography are suggested as being of practical use to the teacher:

To teach the zones: Cut a large circle of manilla tag—over 20 inches in diameter if possible. On this show the equator, the tropics, the circles, and poles. With crayon or water colours, colour the torrid zone orange, the temperate zones yellow, and leave the frigid zones the natural colour of the tag. This colour scheme seems to be the most appropriate as it readily conveys to the child's mind the intensity of the sun's rays in the different zones. Cut from magazines, books, book covers, illustrated papers and other sources, pictures of animals, products, races of men, etc. Ask the children to assist in this and stimulate their curiosity by keeping the teacher's use of these a secret, in which they will share at some future time. When ready to teach the animal life of the zones, for example, fasten the pictures to their proper places on the coloured representation with thumb tacks. For a review lesson, have the class pin on these pictures and others which they may bring.

To teach the cities of a province or country: Having taught the names, location and reason for the latter, tack above a section of the board, a cardboard about 2 inches by 8 inches for each city on which the name has been written in large letters. Under each fasten a tape from the top of the board to the bottom. Then ask the children to bring small pictures and picture post cards of each city. Pin these to the tapes as they are brought in. Allow groups of children to look at them in spare minutes. When the time comes for the geography lesson, give a short talk on the different cities, using the cards as illustrative material. In large classes, where all could not see the cards from the board, pass them from child to child and then pin them to the tape again. After the first lesson the children will take a keen interest in searching for cards which will show the distinctive features of each city. In one instance the class was so enthusiastic that different members wrote to friends in the cities for which they could not obtain enough cards to fill a tape, asking them to send cards.

Map drawing: Map drawing may be either an end in itself or a means to an end. As a basis for review work, a great deal of time can be taken up—often more than the teacher feels she can spare. In schools where there is a multigraph or a hectograph this difficulty is easily overcome. If these machines are not available, have each child draw one very good outline map and then trace from this six or eight on paper about $9'' \times 12''$ leaving either a margin of about $2''$ down one side or a space at the bottom. The tracing may be done at home to save time. During a manual training lesson, have simple folios made to hold the maps, thus preserving them for future use.

How are these to be used? Suppose, for example, the province of Alberta is under discussion. After the position (relative and actual), physical features, heights of land, etc., have been taught, the class is ready for a more detailed study of the province. It is suggested that the following order be followed: mountains and principal hills, rivers and lakes, cities and towns of importance, railroad systems. Draw an outline map on the board locating the heights of land (by small crosses placed side by side), the mountains and hills. Instead of printing or writing the names of these in their proper places, give each a number, using say, white chalk. By the side of the map, make a key, giving the names corresponding to the numbers. Have the children locate and number the mountains and hills on one of their outline maps. Using the same board map, draw the lakes and rivers putting the numbers of these each in a different colour. Thus one in white might be the Rocky Mountains, one in blue might be the Bow River, and one in yellow might be Great Slave Lake. Have the children use separate

maps for each subject then make one similar to that on the board. Next locate and number the cities and finally show the railways joining the places of importance, drawing each in a different colour. The board map, or puzzle as the children love to call it, has now become quite complicated enough to arouse keen interest. For review, point to a number, have the children tell name—give the name, have number told—describe the position, have name given. For a final review, have the class divided into two teams for which names should be chosen. Having provided each child with a piece of paper and pen, point to numbers, not consecutively nor of the same colour, and have children write the names. Exchange papers and find out which team has the most names correct, also which team has the most correct lists. This is much enjoyed as a Friday afternoon exercise and the preparation for this by the pupil provides busy work in spare minutes for several days.

Use of the library: Before teaching a country, spend a few minutes in the library making a list of interesting books relative to the country to be taught. Place this list in the hands of the pupils and encourage them to use the library. Senior boys and girls delight in searching for facts which they think may be interesting to the class. The reading of a well-written travel story by the teacher for five minutes a day previous to or in connection with the formal study of a country will do much to stimulate interest. Try to make this a reward—to be given for a certain number of perfect spelling exercises, for example.

Newspapers, magazines, etc.: Much everyday geography can be learned from current literature. The teacher should be on the lookout for such material at all times. If possible, do not bring the material before the class; rather say, "I saw an interesting article on such and such. Could not some one bring it to me to read to the class?" After this habit has been established, a day will seldom go by, particularly in the large centres, without some child bringing some item of interest. These should be read, posted on the bulletin board and finally pasted into a scrap-book.

Curios: A pleasant and profitable Friday afternoon may be spent examining curios which the teacher and class may be able to collect. Give the children a week or so in which to search for such things as specimens of corals, stalactites, and stalagmites, fossils, silkworms and their cocoons, raw cotton, rubber, etc. Ask to have specimens handed in on Thursday, thus giving the teacher time to look up information about each, if necessary. Require each child to make a search for information about the article handed in. When Friday afternoon comes, show the curios, ask the children to tell what they know and supplement this with facts which they may not have discovered. This may be followed up by compositions either oral or written.

Beginning Aright in Geometry

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MANY teachers of geometry complain of difficulty in arousing the interest of their scholars, particularly in attempting original exercises or deductions. A few bright students find some pleasure in wrestling with these puzzles, but, in the case of too many students, the study of geometry consists entirely in "cramming" certain specified theorems, a course which is always tedious and often positively hateful.

It is hardly necessary to emphasise the importance of original work on the part of the student. Unless he learns to do some thinking for himself, along lines not blazed out for him in black and white in the pages of a text-book, he gains little from his toil. Furthermore, it is evident that before a student can be expected to do any original work, his interest must be aroused. No teacher can force a boy to solve an original exercise. The learner will bend his mental energies to the problem, and solve it because he wants to do so, or not at all. The question then for us to consider is—How shall we make geometry interesting? Is it possible to lead even the so-called dull boy to find delight in matching his intellect against the baffling problems geometry presents to him?

The writer's experience leads him to the conclusion that a very great deal depends on how the student is introduced to the study of geometry. It is not our intention to discuss at this time the introductory course in what is called practical geometry. At some stage in the student's experience he must enter the domain of purely theoretical geometry. This usually happens at the beginning of his second year in the High School. At the outset, some simple explanation should be given him regarding the purpose and nature of the study upon which he is entering. If the student is mature enough to profit by the study of geometry, he is mature enough to appreciate why he studies it.

Do not use a text-book during the first few months. Much of the introductory material in our text-books is meaningless to the beginner and of no immediate use. Moreover, the standard type of text-book, by the emphasis it places on certain facts or theorems in giving them complete demonstration, and practically making no suggestion whatever as to the student's own investigations, is almost certain to give him an erroneous conception of the meaning of the whole subject. Start

with a few accurate definitions, and as soon as possible, lead the class to make simple deductions from these definitions. In introducing important theorems, it is well, perhaps, to lead the class along the line followed in the text to be used later. Thus in our Ontario schools, after discussing the meaning of the terms angle, straight angle, etc., the theorem in the relation between vertically opposite angles may be easily reached, and a formal demonstration worked out. This may be followed by the first case of the congruence of triangles.

At the very beginning the student should learn that the importance of the facts or theorems lies in their usefulness in establishing other facts. To emphasise this all-important idea, the teacher should introduce as many exercises in which these theorems may be applied, as he can devise. Go over them with the class, one by one. Encourage discussion, and above all things go slowly. Work with the students individually as much as possible. Let them express their ideas in their own way, gradually introducing neater methods of expression. Insist on having all exercises neatly written out as part of the text-book that is being elaborated.

When a new theorem is to be introduced, let it be worked out as an exercise, if at all possible. After a satisfactory demonstration has been reached, the teacher may then explain that its future usefulness entitles it to a place among the standard theorems. Then with this new weapon at their service, let the class attack new problems. This method of instruction or guidance may well be followed throughout the student's entire course, but it is particularly necessary in the beginning. He early learns that his own thinking is the all-important thing. He becomes conscious of mental strength. And as surely as physical activity is a delight to the normal youth, so may the exercise of his mental strength be made a source of interest. Once this result is attained, geometry is robbed of all its terrors for the teacher.

The Sunday School teacher asked his class to give him the definition of a "pilgrim."

One little fellow said: "Please, sir, I think a pilgrim is a man who travels a great deal."

This did not exactly suit the teacher, so he said: "Well, I travel about quite a little, but I'm not a pilgrim."

"Oh, sir, but I mean a good man," eagerly replied the little one. —*Harper's Magazine.*

School Teacher—Can you tell me the kind of illumination they had on the ark?

Little Willie—Arclights.

The Teacher's Crowning Gift

ETHEL M. HALL
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"TO be a good story-teller is to be a king among children," says Kate Douglas Wiggin. In a Primary room this is true.

James Whitcombe Riley attributes his success in winning children to the fact that he has remained a child in heart and can appreciate child nature enough to understand what appeals to a child.

"Tell me a story," is such a frequent request of children. For this reason every Primary teacher should be a good story-teller. Any one who has felt the deep enthusiastic response of children to a story well told, will feel amply repaid for the effort necessary to cultivate the art of story-telling.

It is not a new art. It is one of the oldest of arts and it is only in recent years that it has fallen into disuse. Centuries ago story-telling was one of the chief methods of imparting knowledge.

The ancient Hebrews used this method of oral story-telling to preserve their history. Christ used the story to impress great truths. The little Hiawatha received his education through stories told by his grandmother at the door of the tent on summer evenings. In the far north the Eskimo uses stories of animals to teach skill in hunting and fishing. The Norse mother teaches her children the cause of the long day and night by means of the legend of Twilight and Dawn. China and Japan can boast of their professional story-tellers in their market-places. Ancient Greece reached much perfection in cultural story-telling. The stories of the Rhine country are full of mysterious charm for us still. The Arab chief pitches his tent beside an oasis and spends the evening hours relating strange tales of the desert.

"Thus the history of the race is bound up in its stories. Stories grew out of the life of man. They are the expression of the thoughts of the race at the period when the story originated. Through their stories we can read into the lives of the people and feel their longings and strivings after the unattainable."

It is well for the modern teacher to cultivate the art of story-telling. The story told contains an element of life which the story read can never possess. The eyes of the teacher hold those of the pupil and transmit that spark of enthusiasm which will be the means of creating ideals and laying the foundations of character.

The story-teller is an artist. It is hers to select the background for her stories. To do this she must study. Her preparation must be thorough. The story told must become part of herself and be spontaneous. She must see the setting of her story vividly and make the actors live for her audience.

She is at once a student and an instructor. The enthusiasm or indifference of her listeners will teach her where she has succeeded or failed. If she profits by this unconscious instruction she will be repaid by added power to tell stories to larger assemblies.

It is desirable to have a story period every day in a Primary room. The story told must be adapted to the day and the spirit of the listeners. The Primary teacher must not follow set lines of conduct. She must study the children and take her cue from them when possible.

Call for the reproduction of the story by all means. The best time to teach fluent and correct speech is in early childhood. There is a freshness and spontaneity of language and an unconscious delivery then which, if cultivated, will be of lasting usefulness in after years.

Do not call for the story at once. Leave it to grow in the mind of the child. Ask for volunteers to tell a particular story or legend. Never force a child to reproduce. You will find an ever-increasing number of those who are willing and the weaker ones will gradually be encouraged to try. Avoid making corrections during that period. It is better to correct mistakes incidentally, as unconscious work is the aim of the Primary teacher. The story periods will then be the happiest of the day, when the teacher and pupils live again in the story world.

What kind of stories shall the children hear? The child craves stories and needs them without doubt. The one who selects the story must be instinctively cultured. Careful selection is needful if the child is to be educated in the finer spiritual sense. Some one has said, "Every story cheap in quality, whether high or low in price, helps to make a cheap boy or girl; to lower the moral tone; to coarsen the character fibre and turn the child away from what is fine, true, honest and worth while. Before he knows it he has been cheated out of his noblest heritage."

There are beautiful legends in connection with flower study which we may tell. The pupils delight to retell them.

The following are among those which have met the requirement of Primary pupils: Legends of Trailing Arbutus, The Pussy Willow, Forget-me-not, Lily, Hawthorne, Tulip, Japanese Legend of the Chrysanthemum, Buttercup, The Legend of the Daisy.

Bird legends always appeal to children, and especially those connected with Indian myths such as: How the Robin Came to be, How the Robin got his Red Breast, The Origin of the Red-Headed Wood-

pecker, The Legend of the Oriole, How the Blue Bird got his Blue Coat, The Origin of the Birds, How Indians got Fire.

Legends of the springtime and autumn, animal stories and stories of children of other lands are all appropriate and instructive. "The Children's Longfellow" is a splendid book of child stories.

What is the function of the story? It is the means of broadening moral experience beyond the borders of actual experience. It is the means of opening to a child a wide world in which his moral forces may exercise themselves. Little thought may be given to the systematic teaching of virtues as the whole range of ideals may be presented in story form.

"The story widens the child's mental vision, stimulates his imagination, increases his vocabulary, imparts useful information in a pleasant form, awakens a *love* for *good* literature and an interest in all departments of culture, and last but not least performs an important part in his recreational life."

Is the "Crowning Gift" worth seeking? "The magic charm of the story-teller and the object of his quest (says Mary Stewart in her 'Once Upon a Time Tales') is the smile in the eyes of a child, the laugh on the lips of a child, and the dreams in the heart of a child."

Book Reviews

A Tale of Two Cities, and *Alice's Adventures in Wonderland.* G. Bell & Sons, London. Price 9*d.* each. The publishers have put these two classics into excellent form for school use, and have included them in their series of Continuous Readers suitable for the various grades. In the former, that which children find tedious in Dickens has been eliminated without in any way doing violence to the story. The type is clear, the size convenient. These books and the series to which they belong should prove valuable for supplementary reading.

Simple French Stories, by Marc Ceppi. G. Bell & Sons, London. Price 1*s.* A French Reader containing interesting stories in simple language, without difficult constructions, and introducing numerous idioms and words in daily use. The illustrations are good. Suitable exercises are given, and a vocabulary is appended.

A French Dramatic Reader, compiled by Marc Ceppi. G. Bell & Sons, London. Price 2*s.* This is a bright reading-book written entirely in dialogue. Several of the plays may be reproduced exactly as they stand. Every selection is interesting. Vocabulary and notes for each dialogue are appended.

Little Journeys to Rural Schools

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IV.

THE most critical period in the beginner's experience is the opening day of school. If she comes before her pupils well prepared and confident of success, the foundation is likely to be well laid, and a successful career is assured. On the other hand, if she comes unprepared and with a fear of failure, that fear is all too likely to be realised.

It was my good fortune to visit the Lakeside School on the opening day. After three years of successful teaching in the city, Miss Harvey had returned to the rural school, in order to enjoy the privilege of living near her old home. I had her assurance that a visit on the opening day would not be resented, but I was warned that no "regular work" could be attempted.

The school was composed of 35 pupils of all grades—the majority of whom could read and write. There were three beginners and four pupils who had attended only one year.

The first thing that drew my attention, when I arrived shortly before 9 o'clock, was the work already placed on the boards. The front board contained a list of questions to be answered by the older pupils. The teacher furnished the paper for this purpose. A partial reproduction of these questions will suggest their nature and their purpose: What is your name and age? How far from the school do you live? Tell something about your home, your brothers and sisters, etc. Do you like to come to school? Why? What study do you like best? Why? What games do you play at home? What are your duties at home? What books have you read? Which did you like best? Why? Have you ever been away from Lakeside? Where? What would you like to be when you grow up?

"Write the answers as carefully as you can. It may take you an hour to do them real well. I'll tell you to-morrow whose answers are the best." After this brief suggestion by the teacher, the majority of the pupils were eagerly at work. The younger children were supplied with picture books.

The teacher moved about the room and took down the names and ages of all the pupils. She copied these from the papers of those who were writing. The names she arranged on a large card in the following form:

1	2	3	4	5
Willie B. (10)	Joe M. (11)	Tom D. (11)	Mary C. (9)	Jane R. (10)
———	Fred R. (13)	———	Ivy N. (10)	(etc.)

This card she carried with her all the morning, and by noon she could name every pupil in the school and knew the ages of nearly all. Every teacher will understand the advantage thus gained. Not only is it a decided convenience, but the children are at once impressed with the idea that the teacher understands her business—and this *idea* has a remarkable influence that lasts throughout the term.

The beginners were then called to the side of the room, and had the first reading lesson. The sentences used were supplied by the children:

My name is Fred. I am six years old.

My name is Harry. I am seven years old.

The teacher wrote these sentences on the board. The children read them, and then named individual words. After a lesson of 15 minutes, the teacher said,

"Now you may play in the grove across the street until I send for you."

The next group had attended school one year. Their reading lesson was of the same nature, but somewhat more difficult:

My name is Joseph Burns. I am eight years old. My birthday is in July. To-day is Monday. It is the first day of school.

These pupils were then assigned some number work, that was already written on the board.

At 10.15 the teacher said:

"Now we shall have recess; but before you go out to the yard, I wish to know what you are going to play."

One boy answered for the others, "We do not know what to play".

"Do you wish me to tell you a game?"

Everybody was wide awake now. This was a new experience, to have the teacher interested in play. There was an eager chorus, "Yes, Miss Harvey!"

The teacher chose two leaders, and they stood up, one on each side of the room, and called the other boys alternately, until there were 7 boys on a side.

"We'll call Fred's side Division A, and John's side Division B." The teacher produced two large balls from a box, which had been delivered at the school the day before.

"The girls and smaller boys will be spectators to-day; but to-morrow we'll have a game for you also."

All passed out quietly. The "divisions" stood in two lines, about 6 feet apart. The head boy in each line held a ball. At the word "begin", the ball was passed over the heads of all the boys in each division; the last boy in each line ran to the front with the ball, and it was passed again in the same way, until the boy first at the front came to the front again.

Division A won. "Let's try for the best 4 in 7," suggested the teacher. Then followed an exciting time. The sides were well matched; and at the end of 6 games, the score stood 3 to 3. When Division B won the next game, there was a great shout of applause.

Recess lasted 30 minutes. "I cannot always give you such a long recess—but the better you work and the better you play, the longer will be the recess. How many think that is fair?"

Up went every hand.

"And how many will try to come right in promptly when the bell rings?"

All agreed that they would try to be prompt at the sound of the bell.

The seven youngest pupils went home at 11.30. Miss Harvey said she planned to make that a daily practice. She would also dismiss them one hour earlier than the regular time in the afternoon.

The teacher furnished the paper for a writing lesson. One sentence was to be copied as many times as possible in 10 minutes:

This is the very best that I can write to-day.

Then 10 minutes more was devoted to another sentence:

I wish to make my writing better every day.

The teacher moved about the room, suggesting changes of position, a better holding of the pen, etc., and making a note now and then in a little book that she kept constantly within easy reach.

The last 15 minutes of the morning was devoted to a very interesting "mental arithmetic" exercise, in which all the pupils could take part. A brief suggestion is all that can be given here:

How much is half of 60? Up went every hand.
Half of 30? Up went every hand.
Half of 15? There were less hands up.
Half of $7\frac{1}{2}$? Four hands only.
Half of $3\frac{3}{4}$? But one pupil could answer.

Other numbers were dealt with in a similar manner, and the improvement shown by the younger pupils in that 15 minutes was nothing short of remarkable. All were trying with eager interest.

When 12 o'clock came, Miss Harvey asked the children,

"Have you enjoyed the work and play of the morning?"

"Yes, Miss Harvey!" came the eager response.

"Well, as this is the first day of the term, I'll not ask you to return this afternoon. Please have all your new books and everything ready for to-morrow."

My only regret is that I cannot give a more complete account of this opening day. Teacher and children went away from the school in absolute harmony. That one forenoon foretold a happy and successful term.

It will be observed that the teacher came prepared for PLAY as well as for WORK. How many teachers take that precaution? One is just as much a feature of education as the other. If you are told how a man spends his leisure time, you can form a fairly correct estimate of what kind of a man he is. If you are told how a boy spends his leisure time, you can form a fairly correct estimate of what kind of a man he is likely to be. In all our "making of plans", let us keep well in mind the vital influence of play—not only upon the children, but also upon ourselves as teachers. And when we begin work in a new school, let us remember that play offers the best opportunity for getting well acquainted as quickly as possible with the little strangers under our care and for establishing a relationship that will make our work the most successful and the most enjoyable.

"Mary, how many sets of teeth do all people have?" To which Mary replied: "Two, our own teeth and false teeth."—*Ex.*

Schoolroom Decoration

What has been done and what can be done.

PHILIPPE ORTIZ.

IT is generally admitted that, while working its way to the foremost place among the leading commercial nations, America, in its anxiety to achieve material success, somewhat neglected to cultivate the aesthetic side of life. The majority of male Americans have had little opportunity and less inclination to interest themselves in anything other than commercialism and, as yet, the activities of some of our wealthy collectors towards enriching our museums with Europe's art treasures is looked upon abroad as a manifestation of snobbishness rather than of aesthetic appreciation.

What is still evident to-day was sadly conspicuous some twenty years ago when, for the first time, a few people realised that if the material future of the children, upon which depends that of the nation, must be safeguarded by the teaching of sciences, professions and trades, the soul of the nation must be cared for also, and the children, in every one of whom lies an aspiration towards the beautiful, latent in some, active in others, trained to divine and enjoy it.

It was necessary for the school to face the problem and to solve it; and it did, with remarkable alacrity, not merely by teaching its pupils how to "see" an object properly and reproduce it faithfully on paper, but by including in the curriculum the study of the history of art and of the lives of the great masters helped to familiarise them with the best of the world's achievements—the truest expression of every high and noble sentiment—Art.

Art is not taught with the intention of turning out artists by the score, any more than literature is taught for the purpose of making a man of letters out of every pupil. Art is taught to uplift the mind, to develop the taste of the pupil, to make him discern, understand and appreciate the beautiful, to supply him with an antidote, as it were, against the poisonous influences of the materialistic and commercial tendencies of the present day.

It is an undeniable fact that the class-room itself, wherein the pupil spends day after day at his work, has a considerable part in his education; it affects his conduct; it gives him a standard by which he continues to be influenced long after he has left school; for culture is often due more to surroundings than to books.

Therefore the class-room should be more than a light and airy place of study. A corridor should be more than merely a passage from one room to another, for the pupil can surely derive no great benefit from the contemplation of bare walls, however prettily tinted. The school in which the pupil passes so much of his time should be, so far as possible, a place of beauty adorned so as to exercise an elevating influence upon him.

Maps are being used to teach geography, casts and bas-reliefs to teach drawing, because vision is as potent a factor in a child's education as his hearing or touch. In fact, every branch of education, which helps a child to achieve material success in later life, is being rendered more accessible to his intelligence by the aid of objects to illustrate the lessons. This is called *visual instruction*.

Thanks to the unceasing efforts of the pioneers, SCHOOLROOM DECORATION in the United States is now generally accepted as a problem of great importance in the American system of education as understood and expounded by progressive educators. To-day, the State of New York alone spends annually from fifteen to eighteen thousand dollars on illustrative material among the schools within its jurisdiction, and Mr. A. W. Abrams, the able and active chief of that department, wishes that every teacher in the State would take a vital enough interest to require three, four, five times that amount. Every dollar raised by a school for the purpose of artistic decoration is doubled by Mr. Abrams as an incentive to the principals and teachers to join the movement. The desire to possess permanently a number of pictures is intensified by the loan of magnificent collections of framed prints which are sent to the schools by the Division of Visual Instruction. Thousands of pamphlets, emphasising the educational importance of schoolroom decoration and urging the teachers to take it up, are distributed. In fact, every possible means of furthering the good cause is being, and has been for some years, exerted by the State of New York.

This movement to a certain extent has spread all over the country. The co-operation of art publishers has been secured and thousands of art catalogues have been circulated among the schools throughout the land. In many instances, the residents of small towns as well as of large cities have formed ART CLUBS for the purpose of studying art and of raising funds for the purchase of pictures for the schools. The Boards of Education of the various States have officially endorsed the idea. Owing to these combined efforts educational institutions have been provided with proper wall decorations. And I could mention quite a number of small village schools where splendid collections of pictures, that are worth hundreds of dollars, are hung. Such a one is the school of Point Pleasant, New Jersey, for instance, where Reverend and Mrs.

W. F. Clark have, in less than ten years, built up a collection of pictures, worth over twelve hundred dollars, or more than a dollar per resident since that town has only about one thousand inhabitants.

It is evident that, in this respect, America is ahead of all nations. Here the problem of combining the useful with the interesting has been intelligently solved by making the class-rooms themselves pleasant and attractive.

Now almost abreast with the United States, the Province of Ontario (Canada) is doing commendable work in the field of schoolroom decoration under the able directorship of Dr. Pyne, Minister of Education, and of Dr. John Seath, Superintendent of Education, who is one of the truest believers in art as an educational factor I have ever met. Dr. Seath takes just pride in pointing out the marvellous progress made by his department in that respect during recent years and in stating that several thousand dollars are invested annually in good pictures which are distributed among various educational institutions throughout Ontario. It has been my privilege to visit a number of institutions in and about Toronto, notably the University of Toronto where several hundred carbon photographs are displayed permanently, and I gathered from my observations that in Ontario, at least, schoolroom decoration is well understood and the authorities in charge are eager actively to further it. This was shown in their readiness to consider any practical suggestion that I offered to accomplish quicker and still better work. It is shown also by the staunch support given to the cause by THE SCHOOL.

More recently the Province of Saskatchewan joined the campaign. In Regina, Inspector A. Kennedy is working actively, and I have no doubt that in two or three years his province will deserve unlimited praise for its work in connection with the education of its children.

It must not be inferred from the foregoing, however, that schoolroom decoration is universally practised in those provinces or even in the United States; far from it. As yet the artistically inclined educators represent but a small portion of their honourable profession, and there are many in whose breasts the word Art finds no echo. Consequently, schoolroom decoration cannot be considered as satisfactorily established, for no plan of such importance can be successfully carried on by a small minority only; it requires a general co-operation. The progress made in recent years is indeed most gratifying, but if we really believe that the hanging of appropriate pictures in the class-room is a step towards progressive education, if we believe that to develop in the pupils the comprehension and love of the beautiful is at least as imperative as to prompt his aptitudes for commercialism, then every educator whose attention has been drawn to schoolroom decoration and who has

not immediately taken it up within his own community has missed a great opportunity to increase his efficiency.

Aside from the hopelessly "uninterested", there is a category of teachers who are fully aware of the happy influence of properly decorated class-rooms, but, knowing that pictures cost money and not having available funds, they confine themselves to wishing and hoping that some day some money may come from somewhere. Those teachers are not progressive or, knowing that "where there is a will there is a way", they would proceed to learn something about the means placed at their disposal to help them attain their aim.

It is true, of course, that even if the State of New York favours its schools in that respect, there are other places in the United States and in Canada where the schoolroom decoration idea has not as yet sufficiently penetrated to warrant any financial assistance for that purpose from any one but the pupils, their parents and the teachers themselves who are ever ready to subscribe a few dollars from their personal income towards a good cause. But even this seeming lack of official encouragement should not be taken as an excuse to disregard schoolroom decoratign. Let a principal raise what money he can if it be but twenty-five dollars. That will procure a few good pictures as a nucleus for a future collection. That modest start will arouse an artistic interest in the locality; the moral and material support of the residents will soon be obtained; the local Board of Education will make it a point of honour to join the movement and, before long, great results will accrue from the modest but persistent beginning.

The Art Publishers have at all times been valuable co-operators in the field of schoolroom decoration, a number of them going to enormous expense in publishing and distributing broadcast costly catalogues and pamphlets, this in the hope, to be sure, of selling their products; but it must not be forgotten that it required many years of hard labour, of "missionary work" and of cash expenditure before they could even hope to realise any pecuniary benefit from the campaign. Even now, owing to the liberal discounts given by the publishers to educational institutions, it is doubtful whether their profits compensate their efforts. It is therefore but just to class certain art firms as pioneers and co-operators rather than as mere commercial houses, for to their co-operation is due one of the best means of furthering schoolroom decoration—the circulation among the schools of free LOAN ART EXHIBITS which, according to a pamphlet issued by one of those firms, any school may have for a period of several days or several weeks.

If intelligently managed, a carefully selected exhibit of good pictures cannot fail to attract the attention of the residents of a town and their interest in art will thus be stimulated to a high degree. The school

can charge a small admission fee. It may also print at a nominal cost a catalogue or list of the pictures displayed and sell it at a profit to the visitors, and the receipts may be quickly increased by voluntary contributions from the pupils' parents and friends who will more readily disburse small amounts while still under the "artistic spell" than they would if an ordinary subscription list were passed from house to house.

Another offer is made, applying chiefly to schools in towns where the knowledge of Art has either not noticeably penetrated and where more than ordinary methods are necessary, or where, on the contrary, a lecture on Art or on schoolroom decoration can be sufficiently understood to be thoroughly enjoyed. This offer consists in sending to any school within reasonable distance from New York a well-known Art lecturer from one of the leading American Universities, to deliver before the pupils, their teachers, parents and friends a free lecture illustrated with lantern slides made from the finest negatives.

Having successfully accomplished the first portion of his task, that of raising the necessary funds, the principal or teacher has yet to solve the real problem of schoolroom decoration: the investment of the funds entrusted to him for that purpose to the very best advantage. In this respect I must confess that even in the United States where every possible opportunity to avoid mistakes is placed at the purchaser's disposal, quite a number of school officials have totally missed the real meaning of schoolroom decoration. Assuming that wall decoration consists in the mere hanging of pictures, they set out singly or in groups called "Art Committees" and proceed to select for their school whatever subject appeals to their fancy, which fancy very often speaks poorly for their art training.

My profession frequently places me in contact with such people. Sometimes I succeed in offering a word or two of advice. Most of the time I fail, for, generally based on utter ignorance, the tenacity of the picture buying public to worthless Art is incredible. I have also visited several schools thus decorated, and wondered if, in such cases, schoolroom decoration had not been a curse rather than a blessing.

Schoolroom decoration is a profession in which one becomes proficient only through study, observation and experience. It requires a knowledge of art which, presumably, every person who assumes the task possesses. It also requires the ability to decide judiciously as to which subjects best apply to different grades of education and, above all, it requires what few, exceedingly few, indeed, can truthfully claim—a knowledge of the various forms of reproductions and the infallible ability to discern the difference between *the good* reproduction and the many worthless prints which crowd the market nowadays.

It is generally conceded that for the decoration of the class-room the best prints are none too good. It is also universally recognised that the CARBON PHOTOGRAPH, if a *genuine* carbon, is the best form of reproduction in existence. It reproduces with absolute fidelity every detail and even the atmosphere of a painting, as well as the quality of stone and marble (which a plaster cast never does). It never fades, and its durability is beyond question. But, in order to possess these qualities a carbon photograph requires in its making the greatest care and most skilful workmanship. It must be a direct reproduction from the original work of art, instead of a reproduction from a reproduction, and in every case a direct negative in whatever size selected, instead of an enlargement.

The best can only be secured through the processes of comparison and elimination. It is, therefore, the school official's duty to compare and eliminate until he has found it. Only then will the progressive school official discharge his duties in the field of schoolroom decoration for if we believe that to create in the minds of the pupils the ability to recognise and appreciate the beautiful in Art is one of the aims of every school, only GOOD Art, and none but the finest reproductions of GOOD Art should ever enter a school.

Suggestions for the Class-room

Modelling—We are having success in making relief maps in our rural school. There are two kinds of material used, corn-starch and flour. The corn-starch maps are made of one pound of starch to two pounds of salt. Moisten the mixture with a very little water and stir together. Place on cardboard which has an outline of country or state. This is put in a moderate oven and baked until dry. Another way is to put the mixture in and bake before placing on outline. I then wrap the mixture in a damp cloth and one can use it any time.

The flour maps are made by taking two tablespoons of flour to one of salt, adding water enough to make a mixture like clay or putty. The ingredients then can be spread by use of a knife on an outline of country. Water colours can be used to show elevations. Use colours only when mixture is thoroughly dry.

These mixtures can be used for models of noted people, or, at holiday time for turkeys, Christmas gifts or a Santa Claus.—Florence E. Myers in *Normal Instructor.*

Railways of Canada

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[Read at Senior Fourth Grade Meeting of the Toronto Teachers' Institute]

THOUGH railroads seem so modern to us, the iron horse became a factor in transportation away back in 1825, when George Stephenson ran the first train between Stockton and Darlington in England. As soon as the success of Stephenson's road was assured the agitation for railways on this side of the Atlantic began, and five years later (1830) a little locomotive was puffing up and down a portion of what is now known as the New York Central.

In 1832 the railway era of Canada was inaugurated by the legislature of Lower Canada granting a charter to a company to construct a railway from Laprairie, opposite Montreal, to St. John's on the Richelieu River, a distance of sixteen miles. This line, called the Champlain and St. Lawrence, was completed and opened in 1836, and constituted a part of the route between Montreal and New York *via* the Richelieu River, Lake Champlain and the Hudson. The first train consisted of four cars, drawn by horses, locomotive power being adopted the following year. The rails were made of oak with flat bars of iron spiked on them, the gauge being five and a half feet.

For eleven years these sixteen miles remained the only bit of railroad in Canada, but by the year 1850 the mileage had increased to sixty. At the time of Confederation, 1867, there were 2278 miles of road. Since that date there has been an average annual increase of nearly 540 miles, until to-day Canada, with its eight millions of people, has 27,000 miles of road—enough to girdle the globe once and leave two thousand miles for double tracking. Of this mileage ninety per cent. is controlled by five companies, the Grand Trunk, the Intercolonial, the Canadian Pacific, the Canadian Northern and the Grand Trunk Pacific.

Just two years after Stephenson had completed his first line in England there began a strong agitation in St. Andrews, N.B., in support of the building of a railway from that point to the city of Quebec, and in 1836 the St. Andrews and Quebec Railway Company was incorporated. The Imperial Government voted $50,000 to be expended in the exploration and survey of the proposed line and work was begun

immediately. At that time the country through which the survey was prosecuted was held to be wholly British territory, but in the following year (1837) the United States government made objection to the route proposed on the ground that a part of the territory was theirs. Notification of this fact was given to the Canadian government and to that of New Brunswick, and immediately the British authorities ordered work to cease until the boundary dispute was settled. In 1842, by the Ashburton Treaty, or as Lord Palmerston termed it the "Ashburton Capitulation", the northern portion of the present State of Maine was lost by Canada. As a result no further attempt was made to proceed with the proposed line, much of which would, under the new conditions, be in United States territory. This may be looked upon as the first effort to build what we now term the Intercolonial Railway of Canada.

Between 1832 and 1845 more than a dozen charters were granted in the two Canadas. It was at this time that the London and Gore Railway Company obtained a charter for a road from Burlington Bay to London, to be extended to the navigable waters of the Thames and Lake Huron. This was the legislative beginning of that important line, the Great Western, which was afterwards absorbed by the Grand Trunk System.

Among other proposed lines was one designed to restore the ancient portage route around the Falls of Niagara. The line extended from Queenston to Chippewa, but owing to the steepness of the grades near Queenston being beyond the locomotive capacity of the day, it was found necessary to use horses in moving the cars. Soon the road fell into disuse. The charter was amended in 1852 and the line altered to run from Lake Ontario to Suspension Bridge and Niagara Falls.

In 1854 a charter was granted the Atlantic and St. Lawrence Railroad authorising the construction of a line to run between Montreal and Portland, Maine, to afford access to an open winter port, which would be available during the closed season for Canadian ports.

In 1851 the first sod of the Northern Railway of Canada—the pioneer line of Toronto—was turned amid imposing ceremonies by Lady Elgin, and the first train ran from Toronto to Bradford in 1853.

It was about this time that Canadians began to consider seriously the great need for railways. Previously attention had been more particularly directed to the improvement of the water communication of the St. Lawrence Valley; and the Lachine, Welland, Chambly and other canals afford striking evidence of the public spirit of the Canadian people at this time. Now railway competition from the United States threatened to divert traffic from them. Shrewd Canadians saw that they, too, must build railways.

The Grand Trunk.—In 1851 legislation was granted authorizing the construction of a railroad from Toronto to Montreal. In the following year, however, additional legislation was obtained permitting the various companies authorised to build lines: (*a*) from Toronto to Montreal; (*b*) from Montreal to American boundary in the direction of Portland, Maine; (*c*) from Quebec to Richmond, and (*d*) from Quebec to Trois Pistoles, to unite in one general scheme. It was under the provisions of this Amalgamating Act that the Atlantic and St. Lawrence Railway from Portland to the Canadian boundary was leased for 999 years. The company securing control of these lines became known as the Grand Trunk Railway of Canada.

The section from Portland to Montreal was opened in 1853; from Montreal to Toronto in 1856; and from Toronto to Sarnia in 1858. It was not, however, until 1860 that the through line from Portland to Sarnia was completed by the opening of the Victoria Bridge, designed by Robert Stephenson, across the St. Lawrence River at Montreal.

The construction of the railway as outlined was materially assisted by subsidies and bonuses voted by the government of Canada as well as the aid extended by the provinces and municipalities through which the lines passed.

Gradually the system was extended by building new lines or by securing the lease of lines already constructed or under construction. In 1863 the pioneer of Canadian lines (Champlain and St. Lawrence) was leased, and four years later the Buffalo and Lake Huron was secured by a lease in perpetuity. Owing to the inconvenience and expense suffered by the transfer of traffic by means of ferry service between Fort Erie and Buffalo a suitable bridge to accommodate the traffic was constructed over the Niagara River in 1870.

After experiencing severe and unwise competition with the Great Western which controlled lines extending from the Niagara River to Detroit and Sarnia, as well as a line from Detroit to Grand Haven on Lake Michigan, the two systems amalgamated in 1882 with 2835 miles of line.

The next important step in the formation of the present system was the leasing, in 1884, of the Midland Railway, consisting of the line between Port Hope and Midland together with a number of branch lines occupying the territory between Lake Ontario and the Georgian Bay with a mileage of 472½ miles.

The Northern Railway of Canada and the Hamilton and North-Western Railway Company, with a mileage of 482½, miles were secured in 1888. The lines added extended from Port Dover to Collingwood (*via* Hamilton), from Toronto to Collingwood and Meaford, from Colwell to Penetang, from Beeton to Nipissing Junction (near North

Bay) where connection was made with the main line of the Canadian Pacific.

In addition to several short lines in Quebec, the road extending from Port Dover and Simcoe to Durham, Owen Sound and Wiarton was secured in 1893.

Another important addition was the purchase of the Canada Atlantic in 1905 with lines extending from Depot Harbour eastward through Ontario and on to Alburgh Junction, Vermont, with several feeders, making 457 miles in all. In securing this railway the company also acquired the Canada Atlantic Transit Company which owned and operated a number of steamships on the Upper Lakes between the Georgian Bay port terminals of the Grand Trunk—Depot Harbour, Midland, Sarnia, etc., and Fort William, Duluth, Milwaukee and Chicago.

While these additions were being made in Canada the company was also extending across the border from time to time. Among the extensions into the United States were lines from Sarnia and Windsor to Toledo, Chicago, Grand Haven, Milwaukee, etc., in the west, while in the east the Central Vermont with subsidiary lines was acquired and so extended to Long Island Sound. This afforded steamship connection with New York where valuable terminal docks are owned by the company.

The company has also secured running rights—by a joint trackage agreement—over numerous roads where it was not deemed advisable to build a parallel line.

In the early days of the Grand Trunk there were three different gauges—broad, five feet six inches; narrow, three feet six inches, and standard four feet eight and a half inches. The great inconvenience of the different gauges was soon realised. Growing traffic made the interchange of cars a necessity, and gradually all roads conformed to the present standard width four feet eight and a half inches. In altering their line in this regard the Grand Trunk made a record for speed, changing the 420 miles of road between Montreal and Stratford to standard gauge in just eight hours. To-day a car can be sent from almost any one part of the continent to any other over a score of different railways. The beneficial economics resulting from this unrestricted car interchange are hard to estimate.

In the matter of rails, too, there has been a great change. No longer do we see the clumsy old "pear head" of cast iron. The hollow U-shaped rail has also been relegated to the scrap heap. Even the T-rail has greatly changed, and the light 56-pound rail that was considered the acme of excellence for the small engines of twenty-five and thirty years

ago look woefully inadequate compared to the highly-tempered 90-pound steel rails which bear the terrific weight of the modern locomotive.

To facilitate matters between Sarnia and Port Huron a tunnel was constructed under the St. Clair River in 1891. Electric power is now used instead of steam in taking trains through this tunnel. Car-ferries sufficiently large to carry a train of thirty cars run between Cobourg and Charlotte. Owing to the increased business it has been found necessary to double-track many of the more important lines.

Of the three thousand miles of this system in Canada a very large proportion of it runs through Ontario, and so gives it a commanding position in this province. Besides entering all the cities it is in touch with 68 of the 100 incorporated towns. The incorporated villages number 75 of which 51 are on the Grand Trunk and 33 are reached exclusively by that line.

The Intercolonial Railway.—A recent magazine writer declares that "railways in Canada, regarded historically and economically, are a sort of by-product". He further adds that "the twenty-seven thousand miles of rails that have been laid throughout the Dominion have not been put down for the sole purpose of carrying freight and returning profits to railway companies. Putting it more positively, nation-building has been, and is to-day, Canada's chief industry, and the business of making and operating railways has grown to be a large contributory branch". This is very clearly the case in the construction of the Intercolonial Railway—the Government road.

We have already seen how a futile effort had been made in the "forties" to connect St. Andrews on an arm of the Bay of Fundy with Quebec. Scarcely had this effort failed when another project for connecting the Maritime Provinces with the Canadas was proposed. Largely through the lukewarmness of Joseph Howe of Nova Scotia, this resulted in failure. After a short delay New Brunswick and Nova Scotia, each upon its own account, took up the work of constructing such local lines as the trade of the province required, and this was the condition in 1867 when the construction of the Intercolonial became one of the conditions of Confederation. The Intercolonial was not promoted by a commercially-minded people. Their desire was to lay the foundations of a nation, and two steel bands connecting the various parts of the new Dominion were the strongest cohesive force that the statesmen of that day could think of. The construction of the Intercolonial was undoubtedly the means of bringing the Atlantic provinces into Confederation and was the chief factor in transforming Nova Scotians and New Brunswickers into Canadians.

It is quite true that some work on what now comprises the Intercolonial was undertaken before 1867 under Sandford Fleming, but it

was not until after Confederation that work was carried on with activity. The various lines that had been constructed by the governments of Nova Scotia and New Brunswick were reconstructed and connections made in 1872. For a time its western terminus was Riviere du Loup, then after a long delay it reached Levis, opposite Quebec, and a still longer time elapsed before it reached Montreal (1897) which is now its western terminus.

Starting at Montreal the line takes the shortest and most direct route to Point Levis. Following the south shore of the Lower St. Lawrence it makes its way among the picturesque French-Canadian villages. Beyond these it traverses the beautiful Matapedia valley. Crossing the Restigouche it follows the south shore of the Bay of Chaleur, and runs down the Gulf side of New Brunswick to Moncton, beyond which it enters Nova Scotia by way of the isthmus of Chignecto, and continues on to Halifax *via* Truro. Eastern Nova Scotia is fairly well covered by various branches extending as far as Cape Breton. In New Brunswick a branch runs to Fredericton, the capital, and at Moncton it throws off branches to St. John on the west and Point du Chene on the east. There are other smaller side lines in both provinces which make up a mileage of 1456 miles, of which 40 miles are only leased.

The Intercolonial touches six Atlantic ocean ports, viz., Sydney, Halifax, St. John, Point du Chene, Quebec and Montreal.

In addition to the Intercolonial the entire railway system of Prince Edward Island is owned and operated by the Dominion Government. This railway traverses the province from end to end and with its several branches makes up a system of 268 miles. So completely does the system cover the Province that no part of the Island is 15 miles distant from the rails. There the narrow gauge still prevails.

Canadian Pacific Railway.—Following the construction of the Intercolonial and the binding together of Quebec and the Atlantic Provinces came the entry of British Columbia into Confederation and the pledge to connect the East with the distant shores of the Pacific. It was not a new project, but was none the less a daring one in its inception, its execution and its completion. In 1834 the idea was a favourite one with Thomas Dalton, editor of the Toronto *Patriot*. Sir Richard Bonnycastle, in 1846, had written of an iron belt from the Atlantic to the Pacific; Sir John Harvey, in the succeeding year, spoke to the Nova Scotia Legislature of "a great chain of communication which may be destined at no remote period to connect the Atlantic with the Pacific Ocean". Speaking at a banquet in Halifax about the middle of last century Joseph Howe declared that "many in this room will live to hear the whistle of the steam engine in the passes of the Rocky Mountains". About the same time Alan Macdonell of Toronto tried to

organise a company for the construction of a Pacific Railway. Others who favoured or advocated the project in succeeding years were the Hon. James Young of Montreal, Chief Justice Draper, Sir Edward Bulwer Lytton, Lord John Russell, Sir S. Cunard, and Sir Sandford Fleming.

But it was in the main a theoretical dream until, in 1870, the government of Sir John A. Macdonald agreed to its construction as the only means of bringing British Columbia into Confederation, and the only method of making that union a practicable and serviceable one. From that time until 1880 the question was much discussed but little practical progress was made. Sir Sandford Fleming was appointed Engineer-in-Chief. The result of his surveys showed more clearly than had been generally understood the tremendous difficulties of the undertaking.

Then came the battle of the companies, headed respectively by Sir Hugh Allan, J. J. C. Abbott, and Donald A. Smith in Montreal, and by Sir D. L. Macpherson, Sir Frank Smith and others of Toronto. The Pacific Scandal followed, and the Mackenzie government was formed. The Liberal policy of constructing sections of the road so as to connect with and utilise various bodies of water was proceeded with. Finally the Conservative government came back into power, and in 1881, the contract for the construction of the Canadian Pacific was approved by Parliament. The chief promoters were George Stephen (afterwards Lord Mountstephen), Donald A. Smith (now Lord Strathcona and Mount Royal), R. B. Angus, James J. Hill and Duncan McIntyre. Sir Wm. C. Van Horne came from the United States and directed the destinies of the road for twenty years either as General Manager or President. The Company undertook to build and operate the line for a consideration of $25,000,000 and 25,000,000 acres of land selected along its route, together with the right of way through public lands and the necessary ground for stations, docks, wharves, etc. Steel rails, telegraph wire and other dutiable articles were to be admitted free for its first construction. Parts of the road then built were to be handed over by the Government and no line running south in competition was to be permitted.

Great difficulties were encountered from the first. Construction on the north shore of Lake Superior was a veritable problem in engineering science, and piercing the Rockies and Selkirks was something which has seemed to the traveller of late years a new wonder of the world. Criticism in financial circles, bitter deprecation in political circles, lack of faith in the public itself, met the company at every turn. The chief promoters and partners in the enterprise staked not only their reputations but their fortune on it, and more than once absolute and complete failure stared them in the face. Once the Dominion Government, after

grave hesitation and under serious protest from members of its own party as well as the Opposition, advanced $35,000,000 and practically saved the enterprise and its promoters from ruin. The whole amount was paid back in a few years. By the terms of the contract the Railway was to be completed in 1890. As a matter of fact the last spike of the great iron road was driven by Sir Donald A. Smith on November 7th, 1885. It was the successful end of perhaps the greatest financial and engineering enterprise of the nineteenth century. The Government of Canada was involved, for good or ill, in the result; the fortunes of the leading men of Montreal were staked upon it; the welfare of the Bank of Montreal through its manager, Mr. R. B. Angus, was concerned in it; the fate of the Conservative party depended upon its issue, while the unity of the western and eastern provinces hung upon its completion. Great fortunes ultimately came to the promoters, and peerages and honours were showered upon them.

To the country the importance of the completion of this road can hardly be overestimated. Towns and villages grew up in a night and remained as the centre of populous agricultural, lumbering or mining regions. Branch lines were sent out in every direction and the great North-West opened up to settlement and cultivation. Port Arthur, Fort William, Rat Portage (now Kenora), Calgary, Vancouver, grew from nothing into towns, and the last named became an important rival of San Francisco.

For a country, so sparsely populated as was Canada, to construct a railway across the continent was a remarkable achievement. During the quarter of a century since its completion its growth and expansion have been quite as wonderful. From comparatively small beginnings it has developed into a world-encircling institution with magnificent fleets on inland and ocean waters. Its red and white checkered flag floats over 16 Atlantic liners, 22 steamers on the Pacific coast, 5 on the Great Lakes, in addition to many others on the inland waters of British Columbia. The recent acquisition of the Dominion Atlantic Railway in Nova Scotia has also added to its ocean service.

The construction of the Canadian Pacific was the beginning of a new era of progress, the completion of Canadian unity in a material sense, the injection of a new commercial, financial and national life into the veins of the Dominion. So potent a factor has it been in many ways in the history of our country that it may well be termed an Empire builder.

By absorption of minor roads and by general construction the Canadian Pacific at present controls over 12,000 miles of road in Canada.

(To be concluded in the January number.)

Letter Writing

FREDERICK H. SPINNEY
Principal, Alexandra Public School, Montreal

ONE of the chief pleasures in life is the receipt of a cheerful letter, although to a great number of people the writing of letters is not so delightful. The latter fact is due to the wrong mental attitude, the nature of which makes all the difference between *work* and *play*.

In our school we have made letter writing intensely interesting by an exchange of letters with the boys and girls of other schools. One or two of these letters will indicate that the exercise is a most enjoyable one. Here is a letter from a young girl in Pittsburgh:

336 Atlantic Ave., Pittsburgh, Pa.,
October 15, 1913.

My dear unknown friend—

Our class was studying about Montreal, and our teacher, Miss Hill, suggested that we write to the boys and girls in a school there.

I go to Friendship School, and am in the eighth grade. Our school is very attractive. It is surrounded by large grounds, and is situated in a delightful neighbourhood.

Our most important studies are Arithmetic, Spelling, Grammar, Composition, History and Geography. I prefer History and Geography as I think these are the most interesting. Which subjects do you prefer?

On Tuesday mornings the girls from our room go to cooking and sewing school and the boys go to manual training.

Every Monday and Wednesday afternoon I go to a swimming pool and have a good swim. I also play basketball, but do not enjoy that so well as swimming.

I am reading a very good book, entitled "The Four Corners at College". If you can, try to get it, for it is very good. Hoping to hear from you soon,

Sincerely yours,
Myra Kann.

And here is a letter from a boy of the same school:

5210 Friendship Ave.,
Pittsburgh, Penn.,
Oct. 15, 1913.

My dear Canadian Friend—

Our teacher suggested that we write to you, and I am delighted with the idea.

The only time I was in Canada was when I crossed over from Niagara into your country. It did not look any different from the States, except that the Cross of St. George waved over our heads instead of the Stars and Stripes.

The only thing I have against your country is that when I was there I got a Canadian half-dollar, and when I returned home I couldn't spend it, as the dealer would not take it.

I am in the eighth grade of the Friendship School, and hope to pass into the High School after Christmas. We have been studying about Canada lately, and I think it must certainly be an interesting country. I hope to make a longer visit there some time in the future.

Our school hours seem very long here: they are from 9 to 12; and from 1.15 to 3.30. I hope that yours are no longer than ours.

Winter is coming with its sleighing and coasting. I suppose that you have twice as much snow and three or four times as much fun as we have. For my part, I like summer best, with its two months of vacation, camping and fishing.

I hope that we can keep up a correspondence, so please write soon.

Your friend,

KENNEDY BAIR.

No doubt Myra and Kennedy would be glad to receive letters from other parts of Canada.

The following Pittsburgh boys of Friendship School, Friendship Ave., would like to receive letters from Canadian boys and girls: Paul Jenny, Kathryn Wilson, Jessie Karlin, Clarence Young, Marion Howley, Dorothy Grant, Ginevra Keating, Agnes Lindsay.

These pupils are all in the eighth grade, and can write just as interesting letters as those published herein.

Packages of letters from the pupils of Canadian schools, addressed to the following teachers will be promptly answered: Miss Lenora Hyer, Cincinnatus, N.Y. (Ages 11 to 13.) Miss Pansy Beckett, 319 North 13th St., Keokuk, Iowa. (Grade VI.) Miss Gladys M. Brotherington, Levering, Michigan. (Ages 12 to 16.) Miss Elva M. Clark, Troy, New Hampshire. (Ages 10 to 15.) Miss Martha Christianson, Lenroot, Wis. (Ages 8 to 15.) Miss Eugene Ward, Fairbury, Nebraska. (Ages 8 to 15.) Miss Maud McKinnon, 507 North Graham St., Charlotte, North Carolina. (Ages 12 to 17.) Miss LeMyra G. Seaman, Maple Hill, Kansas. (Ages 10 to 14.) Miss Bessie Pinckney, Ainsworth, Nebraska. (Ages 12 to 14.) Miss Cora Anderson, Horrell, South Carolina.

Let the children tell about their school, their home, their pets, their games, their books, their summer and winter holidays. Do not be too particular about mistakes at first. It is well to make optional a rewriting of the letter. Just plan to make the exercise as intensely enjoyable as possible. Teachers will find that the children will take a surprising degree of interest in this exercise; and when the answers are received, the interest will be very greatly increased.

Expression is the best training for the mental faculty. The more *natural* this expression the more effective its influence. The teacher's leading function is to *suggest, encourage* and *inspire*. When the teacher fulfils this function we have the very best kind of teaching.

Suggestions for the Class-room

The Small Class.—In a class of one pupil it is difficult to arouse enthusiasm at times. Since many of you have classes of but one, you should make every effort thoroughly to interest that one in his work. In a class of two there may be a chance to get better work by encouraging a spirit of rivalry. But be careful in a class of two not to let the brighter one do all the work. We have seen this in more than one school: The teacher points to a word on the blackboard. One pupil looks at the word. The good pupil pronounces the word correctly; the other repeats the word after him. Look out for that kind of work.—W. T Poucher in *Normal Instructor.*

School Outdoors—When the warm days come, I often, as a special treat, allow my pupils to have school outdoors. We choose a shady spot. Some old boards laid on the ground serve as desks and seats. The recitation seat and teacher's chair are brought out, and each pupil carries in his book satchel the books and pencils he will need. Any continued misconduct is the signal for an adjournment indoors but this is seldom necessary, as even the most restless are influenced by the peace of Nature on a calm, bright day. The depths of the leafy green trees seem soothing to jangled nerves. This is a nice plan for the last session of the day, when everyone is restless and nervous, and the classes at that time are those that do not require the board or use of writing materials. This plan is helpful to the nervous teacher whose nerves "jangle out of tune" before four o'clock.—*Normal Instructor.*

How to Measure in Freehand Drawing

MRS. HELEN C. MAYBERRY
Normal School, Stratford

IN teaching drawing in a Normal School, one has some opportunity of judging the results of the work previously done in the Public and High School courses, and the one thing that has struck me most forcibly is that no person can draw, or hardly any one, though there are occasional exceptions. The students are not sensitive to bad form, and have not the slightest idea how to make corrections except by the

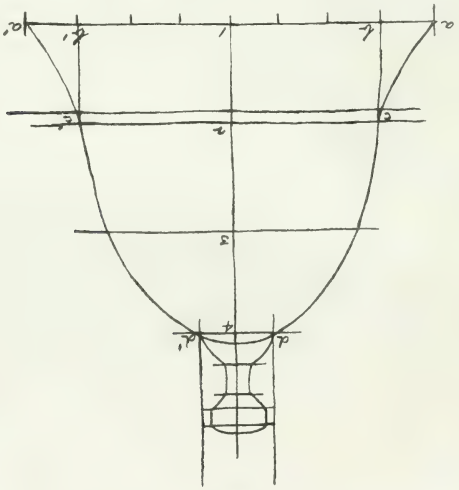

Figure 1.

vaguest kind of guess-work. They can tell all about measuring, foreshortening, vanishing lines, but when it comes to the actual doing of the work, they never get anything the right shape. They may get it nearly so, perhaps, but it does not seem to have been the habit to work at a drawing until it is correct.

The result of this habit of work is twofold; they have drawn carelessly so long that they have lost the faculty of taking careful observations; and second, they have lost interest, and will scarcely take the

trouble to try to improve. The whole field of Art has been covered, in a fashion, again and again, from the kindergarten up, design, shading, composition and life. There is nothing left, and the teacher who would try to introduce academic methods is utterly beaten by the force of habit in the students, and I do not think it possible ever to reclaim this ground which need never have been lost, if the work had been properly handled from the first.

However, now that the Ontario College of Art has been entrusted with the management of this branch of education, we may expect the introduction of new methods, and perhaps some reduction in our very elaborate art programme. Teachers have the privilege of attending the college free of charge; we might suggest that the course be thrown open to school principals and inspectors. Above all, let us have Art for art's sake. Co-relation exists, certainly, but we do not have to stop everything else to work at it.

I have written out methods for two drawings, the same method for different styles of work, and one that will apply to any drawing of whatever kind.

Measurement of greatest height compared with that of greatest width (Fig. 1) shows them to be in the proportion 1:1, the actual size of either object or drawing need not be taken into account at all. The measuring should not be done with a ruler, but on the pencil, or with a string. The cross line a, a' must be bisected at point 1.

Measurement of the parts vertically shows the base to occupy not quite one-quarter of the total, the bell about half, and the knob the last quarter. Horizontal lines for measurements may be drawn through these points. The width of the bell, point 2, is found to be three-quarters the width of the base, which may be marked by verticals from the bottom line b, b'. The width of the knob is not quite a quarter of the base, and the width at point 3 falls more than half-way, but not three-quarters out. The outline may now be struck in, lightly, corrected, balanced, and finished in any way desired. The real work is now done.

It will be noticed that all measurements were taken *vertically* and *horizontally*, not along the lines of the figure, and all measurements were for proportion of parts, and not for actual size; working to a scale has no place in freehand drawing.

The ellipses showing the curves of the different circles would be drawn on the lines a, a', c, c', d, d', as axes, having regard to the perspective of circles.

To apply the same principles to a different kind of model:

The ivy twig must be placed, and viewed from a certain fixed position. The greatest width—right to left—compared with the greatest height—

vertical—is found to be two to one. A rectangle is then drawn on the paper *a*, *b*, *c*, *d* in that proportion 2 : 1.

The large leaf will be found to occupy not quite the full height and not quite half the width. Point 3 is $\frac{1}{3}$ from the top, point 4 not quite $\frac{1}{3}$ from bottom, point 5 is a trifle lower than point 3, point 6 is about halfway up and a little to the left of the first $\frac{1}{4}$ line. In the same way the

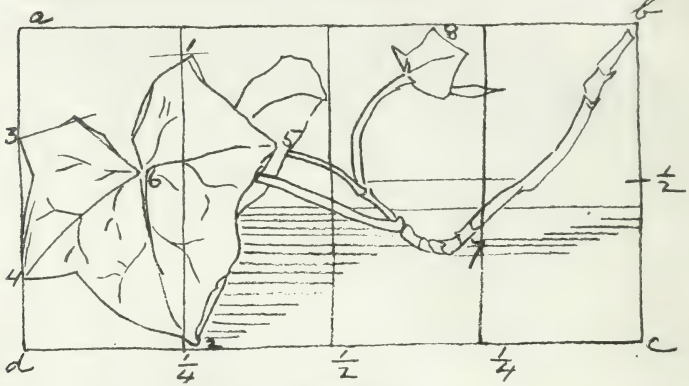

Figure 2

other leading points may be fixed, and when the main lines are fixed the smaller ones will fall into place quite easily. No matter how this drawing is to be finished, in ink for design, in water-colours, or shading, the getting of the shape is the one thing. Measurements for proportion are always from right to left and up and down.

Book Reviews

Readings in Ancient History, by Hutton Webster. Cloth, 228 pages. $1.00. D. C. Heath & Co., Boston, New York and Chicago. This volume includes selections from the *Iliad* and the *Odyssey* and from the writings of the great Greek and Roman authors. The twenty-three chapters in the "Readings" are in themselves exceptionally entertaining and interesting apart from formal narrative history. The extracts have been chosen in such a way as to place emphasis upon biography, and upon those aspects of ancient life and thought that are of perennial interest to the intelligent reader. No one can lay the book down without feeling that he has been brought into more sympathetic appreciation of the great characters, great thoughts, and great deeds of classical antiquity.

Marsh Dwellers

W. A. DENT
Collegiate Institute, Sarnia

TO the student of out-door life, a reedy lake-side marsh presents an ever-attractive field of study and exploration. Whether watching quietly upon the shores or paddling the narrow channels and lagoons or lying in the canoe, concealed among the tall rushes, there is always a possibility that something interesting may occur. Migrants from the far north or south may suddenly appear, and after winding and circling, now far and now excitingly near, may alight close enough to reveal their identity and their habits. Hitherto unsuspected residents of the marsh may betray their presence to the silent watchers by their calls or by actually coming into view, an apparently rather clumsy muskrat may wander about in search of food, or his enemy the keen, swift-footed mink may glide gracefully and sinuously among the reeds. An occasional lithe owl, marsh hawk, gull or heron may pass so close as to fan your cheek with steady wing.

There is a marsh on the north shore of Lake Ontario which a few years ago afforded an intensely interesting field of study. Even in midwinter some life might still be seen; a snowy owl, cold and ghostly-looking against the drifted snow, a mink dark and furry, or a flock of chattering "Old Squaws" in any open water.

During the spring migrations shore birds were abundant on the sandbars, and grebes, loons and ducks appeared in large numbers and great variety in the open waters of the marsh and lake. The shrill, clear whistle of the yellow-legs coming from far up in the sky is music to the ear of the nature lover; and to call them down, watching their forms grow larger and more distinct as with ever-widening circles they sweep gracefully towards the earth, gives a thrill of excitement not soon forgotten. Searching with good field-glasses among the swiftly-moving or running shore-birds will frequently reward one with an unexpected glimpse of some rare and long-sought species, perhaps a marbled godwit, a curlew, or the commoner turnstone. The red-backed sandpiper known to hunters as the black-heart was at the time of which I write so abundant in the springtime as to attract numerous law-breaking pothunters, though this beautiful little snipe is not much larger than a sparrow, being only about 8 inches long. The gaily coloured turnstone with his striking variegations of rufous, black and white is always interesting as he runs rapidly about, hurriedly overturning shells and pebbles in

search of his prey. A never-to-be-forgotten sight, however, was that of a large flock of curlews. These beautiful birds, first sighted miles away against the sky, seemed like some monstrous species of snipe, and so steadily and strong did they fly, and so high as to be scarcely recognisable through strong glasses, that there seemed no possibility of having more than a fleeting glimpse of their distant forms. Suddenly, however, as if first sighting the marsh, their flight seems to lose somewhat of its steadiness, the flock becomes confused, they waver and begin to circle, coming slowly but surely lower, then suddenly dropping till hidden by the rushes; they rise slightly once more, then finally settle and gracefully fold their wings.

After the spring migrations are over the house-keeping operations of the permanent residents of the marsh were of great interest. The Florida gallinule nested in numbers on beds of rushes slightly elevated above the water and concealed by the tall growth. Twelve or thirteen whitish speckled eggs are an interesting sight in a wild bird's nest, but the chief joy is to watch them as they begin to hatch, to see the fluffy black youngsters, for all the world like velvety black chicks, slide down the sides of the nest and float like corks upon the water, gives one a keen sense of natural adaptation. The pied-billed grebe, tersely known as the hell-diver, has a water-logged nest of decaying vegetation usually floating among the rushes and well anchored to their stout stems. For a long time many of these nests, when discovered, were thought to be abandoned nests of former years. It seemed strange, however, that no occupied nests were discovered till, poking one of these floating homes with the paddle, a crunching of broken egg-shells was heard, and the secret was out. The clever little mother, on leaving the nest, had in every case pulled some of the surrounding dead and decayed material over her half-dozen dirty white eggs in a manner which completely concealed them. The American bittern bred also in this marsh, building quite a respectable nest of grasses, etc., on a comparatively dry ground, and laying therein four or five pale buff-coloured eggs. The strange "booming" of this bird was a familiar sound throughout the marsh during the spring and summer months. Its little relative, the least bittern, was also comparatively common, though Cory's least bittern was anxiously sought for in vain. The nest of the least bittern always excites interest and admiration. The nests in this marsh seemed all to be built in the same way. The bird would select a thick clump of rushes and bend over some of the inner leaves at a height of several feet above the water. The bent-over tops of these rushes were woven into a loose but fairly firm floor, forming a little platform in the centre of the clump. From four to six pale blue eggs might be laid directly on this floor, or a few additional broken bits of rush leaves might be added. In addition

to this, a number of rush leaves were bent over slightly higher up, and loosely interwoven to form a roof and back to this airy nest, the entrance being usually from one side only. Once a little green heron, looking strangely like an overgrown least bittern, scrambled up as the bow of the canoe was suddenly thrust into a thick clump of rushes, but this was the only time the bird was seen in this marsh.

Not the least interesting inhabitants of the marsh were those odd but rather pretty little birds, the Virginian rail and the sora. The foot of the rail is relatively large, and well adapted to support the bird upon the floating leaves of aquatic plants, upon which it runs hither and thither with great ease and swiftness. Nests of the sora were quite abundant. They are rudely built of rushes and grass on the ground, but their eight or ten small eggs always seemed quite a discovery. It is hard to tell just how many of the sounds and calls of the marsh are to be attributed to these rails, but the writer has seen a sora running along the shore in the evening apparently in search of food, and incessantly repeating its loud, clear call. The gallinules or mud hens are like real hens, not only in appearance but in their fondness for cackling noises, which while distinct, always suggest those of a fussy old barnyard fowl.

No account of the marsh would be complete without a reference to the sprightly and active little marsh wrens with their bright eyes, their long curved beaks, and their rippling little song. Their ceaseless activity, their fearless inquisitiveness, and their general appearance, all suggest at once their close relationship to their more domesticated cousin, the house wren. They would frequently alight upon the gunwale of the canoe when hidden among the rushes or even upon a paddle held in the hand. Their nests are really cosy little balls of coarse grass and rushes, warmly lined with fine soft grass and with a small round hole in one side for an entrance. These are fastened to a number of reeds, a foot or two above the water, and sway about airily in the breeze. There were hundreds of these nests in the marsh, but few of them seem to be occupied. Some students claim that the wrens build more nests than they use, simply as an outlet for their superfluous energy. Whether or not this be the case, their store of energy seems to be inexhaustible, for they seem never to be still for a single instant, except when brooding the eggs or resting at night.

When the shortening days, the bracing air, the changing foliage, and the frosty nights announce that autumn has arrived, the fascination of the marsh takes a firmer grip upon its victim. No weather is too bad, no hour is too unearthly for him, because he knows full well that in bad weather and at unearthly hours the marsh holds a flying, swimming, diving, quacking, restless throng, making it their temporary

home upon their long journey southward. Canvas-backs, redheads, mallards, pintails, blacks, whistlers, buffleheads, and many other feathered beauties of their beautiful tribe frequented this marsh during the fall flight. The mere names bring back pictures of wild mornings when the surf thundered on the bar, and the frequent gusts of rain and wind over the brown expanse of marsh threatened to completely demolish the frail hide and drown its occupants. It is with sincere regret that one notices the ever-diminishing numbers of these royal game birds of the marsh. But all too soon winter closes in and the silent marsh is left to the few hardy wild things and a few venturous human beings who await with what patience they can summon the miracle of spring.

Book Reviews

Introduction to World History, by M. W. Keatinge and N. L. Frazer. Cloth, 284 pages. 2*s*. Adam & Charles Black, London. It is the experience of many students that their study of history in school leaves many blanks which they have very little opportunity of filling except by independent reading after school life has closed. This book presents a brief sketch of World History which enables the student to fit into an ordered scheme of development the history he has learned and the scraps of detailed information he has picked up. It has sufficient "atmosphere" to interest the pupil and contains a sufficiently detailed sequence of events to give the time-perspective. The teacher may select for himself the topics which he wishes to expand. The maps and the illustrations are good.

Macaulay's War of the Succession in Spain, edited by A. W. Ready. 102 pages. Price 1*s*. *Burke's Speech on Conciliation with America*, edited by John Morrison. 140 pages. Price 1*s*. 6*d*. These two very neat and convenient volumes belong to the series of *Bell's English Classics*. Each has an introduction and excellent explanatory notes. They make good material for supplementary reading in history, and will be found very useful in the High School library.

The Pierce Spellers, by Walter Merton Pierce. Cloth, 131 pages. 25 cents. Ginn & Co., Boston. This two-book course in spelling for grades three to eight has the following commendable features: the principle of selection of words, viz., only those that present difficulty in the writing vocabulary of the average person; the shortness of the length of lesson and hence the opportunity for the intensive study of each word; the bold clear type in which the words are printed; the frequent and well-classified reviews; the very suggestive hints on method.

T. E. C.

Character Studies

MARGARET D. MOFFAT
Bolton Avenue School, Toronto

SOME children there are who sit "mum" and diligent from nine till four, from Monday till Friday, from September till June. If ever they are absent the teacher would not notice, if she had not to mark the register. They exhibit no interesting qualities such as anger, malice and clamour—untidiness, inkiness, laziness. They are like the common people, and remind one of President Lincoln's observation, "The Lord must love the common people. He made so many". Their names are never recorded in history.

I suppose every schoolroom has its Irrepressible. The Irrepressible just now is eight and fair, with short curls which are not altogether spontaneous. She looks like a doll and has always a clean white "pinnie" with frills beautifully ironed. Her voice is quite shrill when she sings or recites and, in the morning when the children repeat their psalm, I can hear her above the others saying, "Blessed is the man that walketh not . . . nor sitteth in the seed of this cornfield". She is annoying to the children near her. She does her reading and adding in an undertone and disturbs their reading and adding. If I catch her eye she smiles unabashed, unafraid, unashamed smiles which say, "Yes I am doing wrong. I intended to do it. What are you going to do?" When she takes a good "streak" she is just as great a nuisance. She wants to present her work constantly for approval. Big brothers are responsible for the Irrepressible's troublesome ways.

Every session I ask a set of questions as a means of character-study. "Where would you like to go best in the world? What do you want to be when you grow up? What person, game, lesson, animal, flower, story do you like best? What do you like best to eat, to be dressed in? What work do you like to do for your mother, for your father?" To-day I asked these. The Irrepressible is going to be "a good misshonery and pretch the gausply to every crecher".

Tantrums is another case. His name explains. He has blue eyes, freckles and, of course, red hair. He sits either on the small of his back or tilts his seat and sits on the edge. If he is requested to sit in a hygienic position he sulks. He likes to eat best ice-cream puffs. He likes football. He is going to be a "horse-deelor" when he grows up. He doesn't like any lesson—in school.

The Best Reader is also a romancer. Show her any picture and she can instantly compose a most fascinating "yarn" about it. She would love to go to the sea-shore. She would love to wear a pink silk dress trimmed with gold lace. She likes best for eating, "oranges and bananas sliced with whipped cream on". The game she likes is Pigs' Grunt. She is fond of geography and wants to be a school-teacher. The Best Reader once lived in Lindsay. She often gives me pointers in teaching when I vary from the Lindsay standard. The Best Reader has great influence with the class. They strive to emulate her in natural expression. I have found it advisable to discourage her romancing tendency. It can be carried too far.

Book Reviews

Academic Algebra, by George Wentworth and David Eugene Smith. 442 pages. Price $1.20. Ginn & Company, Boston. This text covers the work required for university pass matriculation. The book is of the same high standard that characterises all the texts by these well-known authors. Some of the special features are: (1) The early introduction of the equation and the formula and their application to the solution of simple commercial and shop problems. (2) The familiar illustrations by which the negative quantity is introduced make it seem real at once. (3) The fundamental operations are deduced by simple generalisations from arithmetic. (4) Long multiplications and divisions are omitted as well as many technical examples and problems which are not concerned with modern conditions. (5) The graphic method is introduced in illustrating the negative quantity, the idea of function and the nature of the equation. (6) Provision is made for oral work, a feature which is not usually found in algebras. (7) The book contains a large number of diagrams in illustration of theory and problems.

J. T. C.

Junior Regional Geography. The British Empire with its World Setting, by J. B. Reynolds. 200 pages, illustrated. Price 1*s.* 4*d.* A. & C. Black, London, Eng. This concise little book deals with the geography of the British Empire in its relation to other parts of the world, by regions. Some of the regions described are: North-Western Europe, Mediterranean Region, South-Eastern Asia, etc. Much useful information regarding the climate, vegetation and physical features of these regions is given. The suggestions and questions at the end of each chapter are excellent for review work.

A Small Matter in Fractions

JAMES P. TAYLOR
Primrose, Ontario

NOT long ago, at a convention of Ontario teachers, a schoolmaster said that a good many teachers cannot explain why, in division of fractions, the divisor must be inverted. Four or five years back, a writer in the United States said the same of American teachers. And, to quality them to make the matter intelligible, he put forth the following:

$$\frac{3}{7} \div \frac{5}{11} = \left(\frac{3}{7} \times \frac{11}{11}\right) \div \left(\frac{5}{11} \times \frac{7}{7}\right) = \frac{3\times11}{77} \div \frac{5\times7}{77} = \left(\frac{3\times11}{77} \times \frac{77}{1}\right)$$
$$\div \left(\frac{5\times7}{77} \times \frac{77}{1}\right) = (3\times11) \div (5\times7) = \frac{3\times11}{7\times5} = \frac{3}{7} \times \frac{11}{5}.$$

But this, if not too mysterious, is too tortuous and laborious for an elementary class.

Let me offer two or three simpler ways.

(1) $$\frac{3}{7} \div \frac{5}{11} = \frac{\frac{3}{7}}{\frac{5}{11}} = \frac{77\left(\frac{3}{7}\right)}{77\left(\frac{5}{11}\right)} = \frac{33}{35} = \frac{3\times11}{7\times5} = \frac{3}{7} \times \frac{11}{5}.$$

or, $\frac{3}{7} \div \frac{5}{11} = \frac{33}{77} \div \frac{35}{77} = \frac{33 \text{ seventy-sevenths}}{35 \text{ seventy-sevenths}}$. If the numerator and the denominator be divided by 1 seventy-seventh, the result is $\frac{33}{35}$, which $= \frac{3\times11}{7\times5} = \frac{3}{7} \times \frac{11}{5}$.

(2) Divisor × Quotient = Dividend.

or, $\frac{5}{11} \times \text{Quotient} = \frac{3}{7}$.

and, $\frac{1}{11}\,\text{Quotient} = \frac{1}{5} \times \frac{3}{7}$

$\therefore \text{Quotient} = \frac{11}{1} \times \frac{1}{5} \times \frac{3}{7} = \frac{3}{7} \times \frac{11}{5}$.

(3) Construct a figure, and divide it into seventy-seven equal parts. Then, $\frac{3}{7}$ of the figure = 33 parts; and $\frac{5}{11}$ of the figure = 35 parts.

Consequently, $\frac{3}{7} \div \frac{5}{11} = 33 \div 35 = \frac{33}{35} = \frac{3 \times 11}{7 \times 5} = \frac{3}{7} \times \frac{11}{5}$.

(4) $\frac{3}{7} \div \frac{5}{11}$.

$\frac{1}{11}$ will go into $\frac{3}{7}$, $\frac{3}{7} \times 11$ times

and $\frac{5}{11}$ will go into $\frac{3}{7} \times 11$, $\frac{1}{5} \times \frac{3}{7} \times \frac{11}{1} = \frac{3}{7} \times \frac{11}{5}$.

This should be short enough and simple enough for any one.

There is another way, and a very good way, in the High School Arithmetic.

The Round Table

To the Editor of THE SCHOOL.

Dear Sir,

I am interested in school decoration, and I thought I would tell you what we are doing at my school.

In October we had a School Fair in connection with our Agricultural Work. We decorated our school with paper cuttings, etc., and pinned our choice pieces of art work on the burlap at the back of the room. The trustees gave us a prize for our work along this line. The prize consisted of two lovely pictures, "The Angelus" and "The Shepherd".

I find the Perry pictures very helpful in all my work, Art, History, Literature, etc., so I sent away some money and received twenty-one $10'' \times 12''$ pictures; also some small pictures, twelve in number. I am giving the large pictures myself and the boys and girls are bringing pasteboard to form backs for the pictures. The trustees are getting the glass and we are passe-partouting the large pictures. These we intend hanging on the walls so that the boys and girls can see them well. The small pictures are to be mounted on pretty dark brown mounting paper and placed side by side under one of the sideboards. These are especially for the wee tots and are to be used in oral composition.

I encourage the boys and girls in trying to find pictures dealing with our History and Geography, and it is surprising how much these help us.

We are fixing a teacher's room and a place for the boys and girls to wash their hands. Next year we will get two more pictures as prizes at our fair.

I shall be very glad to read articles on "How we decorated our RURAL School".

Yours respectfully,

MARGARET A. KITCHEN.

Whitevale, November 7th, 1913.

Reading and Writing of Finite Decimals

A Few General Thoughts

R. W. MURRAY, B.A.
Principal, Model School, Toronto

THERE should not be much difficulty in teaching a class to read and write finite decimals, if the same exercises, in the case of integers, have been thoroughly mastered, and if we proceed to teach the reading and writing of decimals on the basis of what is known. Much of the confusion that often arises in future lessons on this subject is due to a lack of clearness of presentation and thoroughness of drill on this first step of an interesting part of arithmetic.

In the reading of decimals let us avoid altogether the reading of such as mixed fractions at first. It will be enough to treat them as simple fractions, and to do so without this expression in the form of a vulgar fraction.

2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

Place a row of digits such as this upon the board and explain that this represents 2 continued to the right and to the left without limit. Now, which of these 2's would represent the quantity two books, etc.? The answer given will show the necessity of fixing upon one of them. Let the one thus selected be marked but not with the decimal point.

Millions Thousands Units.

2, 2 2 2, 2 2 2, 2 2 2* 2 2 2 2 2 2 2 2

u h t u h t u h t u

The marked 2 represents two units of the unit period, the next to the left two tens of the unit period, the next to the left two hundreds of the unit period, and so on, as we proceed to the left, with the places and periods in that direction.

Drill on the reading of each 2 giving its *place* and *period*, and then by reduction we can read a combination of 2's, as 22, 222, etc., and arrive at the conclusion that the *place* and *period* of all the integers are determined by the right-hand digit of the number. This is the most important fact to emphasise at this stage, as it will be seen to be equally true in the case of decimals.

The reading of integers having been thus reviewed or taught if found necessary, an advance may be made to the reading of finite decimals.

thousandths millionths

2 2, 2 2 2, 2 2 2, 2 2 2* 2 2, 2 2 2, 2 2 2, 2 2

t u h t u h t u h t u ths ths u t h u t h u t

Referring again to the row of 2's to the left of the one that is marked, establish the ratio between a 2 to the left of another. It will be found to be 10 times the one to the right. Therefore the 2 to the right of another is one-tenth of the former. This is merely reviewing, in so far as integers are concerned. If this be true, it is equally true when we consider the digit to the right of the marked one, for there is the same ratio between two 2's no matter where they are in the row of digits.

The first 2 to the right then of the marked one is two-tenths of a unit, the next two-hundredths of a unit and thus we have completed a period, which has only two digits to the right of the marked one. Continuing, we have unit-thousandths, ten-thousandths, hundred-thousandths for the next period, and so on. The decimal point may now be introduced merely for convenience. The pupils will not think that it occupies a *place.*

In reading the decimals, let us read each of the 2's giving *place* and *period* as we did in the case of integers. So by reduction we read combinations of the 2's as we did in the case of integers, and *conclude* that the *place* and *period* are determined by the position of the right-hand digit. Having thus read integers and fractions separately, we are prepared to read 2.2 as twenty-two *tenths of a unit,* 27.036 as twenty-seven thousand and thirty-six *unit-thousandths.* There should be considerable drill on the reading at this stage, until the pupils read all numbers without any reference to the decimal point excepting to determine the place and period.

Writing of the decimals will need only a word or two, for the pupils have already written them in words, when they have written what they have spoken.

If the pupils are drilled on the order of the periods they should be able to tell how many digits will be used to write any number.

Example.—Write 215 ten millions.

Examine the word millions. What period is indicated? The third period. How many digits in three periods? Nine. What place in the third period is the right-hand digit? The second place. Then 5 is the eighth digit and ten digits will write the number. Similarly treat any decimal. Write 76 ten-millionth. Examine the word millionth. Does it represent an integer or a decimal? What period is asked for? The third. As before there are nine digits in three full periods. Is the third period full? No, it stops with second place, and since the unit place in the unit period is not reckoned in the decimal, there are only seven places needed to reach ten-millionths.

Hence 6 is the seventh place and 7 is the sixth place. The number is .00,000,76.

With practice the number of digits in any number whether integral or decimal can be determined, before writing the number and marking it off into periods. This not only proves a very interesting exercise, but one that will help very much in impressing the real meaning of a decimal fraction upon the minds of the pupils.

Book Reviews

The Freshman and his College, by Francis C. Lockwood. Pp. 164. 80 cents. D. C. Heath & Co., Boston, 1913. This volume is a collection of essays and addresses by eminent American educators upon the subject of the Freshman and the College. Orations and essays by David Starr Jordan, William James, Charles William Eliot, William DeWitt Hyde, Francis Cummins Lockwood, John Butler Johnson, Alexander Meiklejohn, John Grier Hibben, Wilbur W. Thoburn and John Henry Newman occupy some 130 of its pages. The author contributes a valuable introduction in which the highest ideals of college life are clearly portrayed. There is a carefully selected bibliography. In the reviewer's opinion the book is stimulating and valuable, though the "slang" expressions in the introduction ought not to have been penned by a professor of English Language and Literature. P. S.

How to Make Our Girls Graceful, by G. E. Kelly and L. H. White. Geo. G. Harrop & Co., London. Paper, 21 pages. Price 1*s*. A manual of Deportment with descriptions of valuable exercises and a supplement consisting of a programme of exercises suitable for performing at a school entertainment.

The New Normal Music Course. Book I: cloth, 144 pages. 32 cents. Book II: 244 pages. 40 cents. Book III: 256 pages. 50 cents. Silver, Burdett & Co., Boston, New York and Chicago. These books are carefully graded so that they may be used by form teachers who are not trained musicians. The selection of lyrics is excellent. The type is large, clear and open; the books have a better appearance than most music books. The work throughout is organised on pedagogical principles.

A Social History of England, by George Guest. Cloth, 209 pages. 1*s*. 6*d*. G. Bell & Sons, London. In this book kings are mere names and all importance is given to the people. Thus it emphasises a branch of history which is quite properly receiving ever-increasing attention. The aim is to trace the gradual emancipation of the worker from a state of slavery to his present position of power. The language is simple and quite within the range of Fourth Book Classes. The illustrations are good. The book is a valuable aid in preparing lessons in history.

Current Events

The Call of the Wireless

MARCONI should certainly be one of the happiest men in the world to-day. Though a young man—for he is still in his thirties —his invention has already saved the lives of more than a thousand men, women and children. Then, too, the highly dramatic nature of the rescues fixes the attention of the whole world on the man who made them possible. From the wreck of the *Titanic* over six hundred were saved, and all would probably have been saved had there been a night operator for the wireless apparatus on the *California*. Even more dramatic was the scene at the burning of the *Volturno* on October 9th. The flames were discovered at seven o'clock in the morning. No ship was in sight. The wireless call for help was sent out. From a hundred miles around the vessels responded. At eleven o'clock the huge *Carmania* stood by. By six in the afternoon ten ocean steamships surrounded the burning vessel. Of the 657 who were on board they rescued 532. Thrilling stories are told of the heroism, both of those on board the *Volturno*, and of the crews of surrounding ships, who strove, in spite of the tempest, to reach the passengers on the burning vessel. But the greatest figure of all is the quiet scientist whose magic made effective the call for help. It seems certain that, in the case of the *Volturno*, all would have perished had it not been for the call of the wireless.

Once full advantage is taken of Marconi's discovery, and all vessels required, in addition, to carry apparatus for transporting passengers from ship to ship in stormy weather, the danger as well as the loneliness of ocean travel will almost have disappeared.

The Panama Canal

On October 17th President Wilson pressed the electric button that exploded a charge of dynamite and cleared the last trench in the Panama Canal. Of course much work yet remains to be done. The Culebra Cut with its several huge landslides is still the most serious problem. It appears that the scientists did not foresee the chemical action of water on the lower strata of earth in the cut. This, crumbling, left the upper layer without sufficient support. It is expected, however, that the Canal will be ready for navigation in January next. President Wilson seized the opportunity to promise a settlement of the year-old dispute as to the terms of the Hay-Pauncefote Treaty, 1901. It will be remem-

bered that, notwithstanding the terms of this treaty, by which the vessels of all nations were to have use of the canal on equal terms, the American Congress in August 1912, passed an Act exempting American ships from paying tolls in the canal. In answer to the objections raised by Great Britain President Taft announced his willingness to submit the matter to arbitration. President Wilson proposes to solve the question at once by recommending Congress to reverse its action.

A Dictator in Mexico

Conditions in Mexico get worse instead of better. All pretence of Constitutional Government was set aside by President Huerta when, early in October, he sent a body of soldiers to the meeting of the National Assembly and marched 110 of the members to the penitentiary. Their offence was that they had demanded assurances of personal safety and threatened, if these were not given, to withdraw from the Capital and hold their meetings elsewhere. Under these circumstances the elections for a new president, which were held on Sunday, October 26th, have not improved matters. Four candidates appeared but few voters came to the polls. No one was considered elected and General Huerta is still nominally in control. It appears that a communication has since been made by the United States, requesting General Huerta definitely to withdraw and that this he has refused to do. The situation is full of danger. Armed intervention may yet be necessary. The powers of Europe, which have interests in Mexico, seem willing to let the United States take the initiative in any action that may be found necessary to re-establish a stable government and to protect foreign residents. The danger of serious conflict lies in the fact that intervention by foreign troops may arouse patriotic feeling to the support of Huerta and result in a guerilla warfare that would require a definite occupation of almost the whole country by American troops for an indefinite period. Military experts tell us that an invading force would require to be four times as large as any force they might find to oppose them and Mexico has already a large army on a war footing.

New Zealand's Navy.

On October 28th, Mr. Massey, the Premier of New Zealand, announced a change in the future naval policy of that Dominion. Instead of voting annual subsidies for the support of the British Navy, as they have done in the past, they will henceforth build their own ships and maintain their own navy, as the Commonwealth of Australia already does. They feel that they are at a great distance from the British naval centre and must have effective ships stationed on their own coasts. This problem Canada has yet to solve.

W. E. M.

Hints for the Library

A Short Geography of Europe, by A. J. Dicks, B.A., B.Sc. 80 pages, 19 illustrations. Price 10*s*. Cambridge University Press. In this concise book is given a description of the chief continental countries of Europe. The chapters on climate show the effects of latitude, altitude, winds, etc., in a very clear way. Similarly chapters deal with vegetation and the other physical conditions of the countries. Both teachers and pupils will find additional interesting information to put life into their study of geography.

The New Canadian Bird Book, by W. T. MacClement, M.A., D.Sc., Queen's University. Dominion Book Co., Toronto. We have had the privilege of examining the manuscript of this book. Written by one of our Ontario professors, it deals with the subject from the Canadian point of view. The most unique feature is the large number of full-page coloured illustrations. It seems to be just what teachers of Nature Study and Nature students have been waiting for.

W. J. D.

Black's Sentinel Readers. Book I, 10*d*.; Book II, 1*s*. 140 pages each. Adam and Charles Black, Soho Square, London. Edited by E. E. Speight. Each volume contains eight full-page illustrations in colour. The selections are not didactic in character, but should be found very useful in imparting moral lessons. These selections may be made a medium, not only of awakening intelligence and imparting knowledge, but of widening the sympathies of boys and girls in all humane directions. If placed in the School Library they will be eagerly read by the pupils, or the teacher may find them useful for the Friday "Story-Hour". These two volumes are suitable for grades up to and including Junior Third.

A Geography of the British Empire, by W. L. Bunting, M.A., and H. L. Collen, M.A. Pages viii+160. Maps, diagrams and 29 illustrations. Price 3*s*. 6*d*. Cambridge University Press. The text describes the geography of the parts of the world in which we are most interested. It is not a mere summary of facts but discusses the relation of man to his environment and the connection between physical features and industries. Canada is dealt with in a very intelligent manner, though the old boundaries for Manitoba, Ontario and Quebec are retained. It can be recommended to our teachers as a valuable book for the school library.

G. A. CO.

Laws of Health for School, by A. M. Malcolmson, M.D. Pages 88. Published by Adam and Charles Black, London. This little book deals with elementary physiology along sane lines. It treats in simple language the facts of physiology and hygiene that would be taught to the first grade in a Canadian Public School. The treatment is lucid, accurate, and recent. The line drawings are helpful also. G. A. CO.

A Text-book of Geography, by A. W. Andrews, F.R.G.S. Pages xiii + 655, with numerous maps, diagrams and illustrations. Price 5*s*. Published by Edward Arnold, London. This is an English text which combines physical, political and commercial geography. Nearly the first hundred pages deal with purely physical geography. Land forms, contour maps and climate are emphasised. Many maps showing altitudes, isobars, isotherms and rainfall are given under the different continents and these are used in developing the industries of the people. It is a very happy combination of the physical and commercial in their proper relations, which is what true geography largely consists of. It can be highly recommended to our Canadian teachers as full of suggestions that will be new and that will make their teaching more effective. G. A. CO.

Animals: Their Use and Relation to Man, by Carolyn D. Wood. 12mo, cloth, 192 pages, illustrated. 60 cents. Published by Ginn & Co., Boston. This is an elementary book that describes the most useful animals, particularly the domesticated one. It is useful both in Nature Study and in Geography. The illustrations are numerous and well executed. G. A. CO.

The Wanderings of Animals, by H. Gadow. Cloth, 150 pages and 17 maps. 25 cents. Published by Cambridge University Press. The title of this little volume hardly conveys a proper idea of its contents. It is really a work on the Geographical Distribution of Animals. It is a fascinating book to read, by one of the most capable English Zoologists. The teacher cannot fail to have his knowledge broadened by reading this book. G. A. CO.

Weber's Deutches Heft. Cambridge University Press, London. Price 1*s*. 6*d*. The "Deutches Heft" is a blank book of 128 pages for notes in German. The pages have printed headings *in German*, arranged in such a way that a student using the book would unconsciously pick up most of the vocabulary. The principal *idea* which Weber had in mind in preparing his "Heft" is that "as a genuine philatelist prefers filling his stamp album *by his own individual effort* to the easier method of *buying someone else's collection*, so the notes collected and inscribed in this book should be the result of *the owner's research* in reading and conversation, not copied from a "grammar". The Heft abounds in practical suggestions for any teacher of German, whatever methods he prefers. J. B. W.

Suggestions for the Class-room

The Sullen Child.—When a child is sullen, he is usually looking for a ruction with the teacher,—a ruction that shall attract attention from the other pupils. The way to deal with him (or her) is to ignore him entirely, or rather to ignore his sullenness. He is wondering what you will do about it, and his mind is made up that, whatever you do, he will resist and become more sullen. Disappoint him. He wants notoriety; don't let him have it. Treat him as if he were in a normal condition. Don't be unusually stern with him. Don't be unusually pleasant with him. Do not let him suspect, by seeing smile or frown or by a wink of your eye, that you have noticed his sullenness. This treatment will cure a large proportion of cases. Of course, if there is real cause for sullenness that you can remove, you should remove it.—*Selected.*

Sewing Cards.—Use sewing cards that have large holes, so that the pupils can make dots for their pencils through the holes. Remove the card and complete the design with the pencil for a drawing lesson. Such cards may be used as an illustration for a story, especially when filled in with coloured crayon or water-colours.

Cards with large holes may also serve as stencils for blackboard work. They are also useful in making other sewing cards. The teacher often finds it an advantage to have sewing cards of the same design for each member of the class. The sewing cards with large holes are very helpful in making home-made sewing cards. A pleasant strife is often engendered in this way and beautiful designs are often the result.

The completed product makes fine decoration for the schoolroom.—*School Education.*

The "Word Fitly Spoken".—Said a child to its mother, after working over its school tasks one evening until eleven o'clock:

"Mamma, do you suppose the teacher will say it's good?"

"Doesn't she ever tell you so?" asked the mother in return.

"Not very often," said the child, with a sigh, putting her books aside.

What a lesson for teachers in that simple question! Oh, do not withhold the "word fitly spoken". Give it now. A teacher's heart should be overflowing with love and sympathy for those intrusted to her care.

Let the Great Teacher be your model.—*Public School Journal.*

The Essential.—If there is anything that is essential to the moral health and strength of a boy or girl, it is to plant deep in the consciousness the fact that this is an ordered world; that a man reaps that which

he sows; that he secures the rewards for which he is willing to make the effort, and gains the prizes for which he is willing to pay the price in labour, self-denial, and strength.—*Hamilton Wright Mabie.*

How to Make Coloured Crayons.—Coloured crayons are commonly regarded by teachers and pupils as one of the luxuries of the schoolroom. In some schools if they are used at all they must be purchased a few at a time by the teacher. Few people know that the common crayon can be transformed, at slight cost, into as fine coloured crayons as any teacher could wish to use.

All that is needed is a few bottles, a cup, and a few packages of "Diamond Dyes". The following colours work well; probably the first five will be all that are needed. Yellow for cotton, eosine, light blue, green, Bismark, garnet, cardinal, red, crimson, violet, purple for wool.

Moisten the dye with a little cold water, then add a pint of boiling water. Keep in bottles for use either for ink, coloured crayons, diagrams, map colouring, or any other of the various uses of the dyes not directly connected with the schoolroom.

Use the common school crayons, the soft finish. Place as many as are needed in the cup and pour on dye to cover them. Let it stand about ten minutes. Then pour off the dye, to be kept for further use. Place the wet crayons where they will be kept warm about twelve hours. If the pupils assist in making them there will be an increased appreciation, for children are always interested in things that they can make for themselves.—*Teachers' Magazine.*

Talk with the Pupil Alone.—Always talk over a pupil's misconduct alone with him. One good private talk with a pupil is worth twenty reprimands in the presence of the school. It is worth everything to get the pupil's point of view, to let him state his side of the case fully and freely.

Listen to all he has to say and then tell him frankly and kindly where he is in the wrong. He will trust you after such a talk as he never will if you "jump on him" before the school for every misdemeanour.

Half our disciplinary troubles come from the outraged feeling of misguided pupils that they never have a chance to tell their side of the story.—*Selected.*

Progress.—Teachers who perfunctorily perform their school tasks year after year, dealing with the daily routine in the same manner that characterised their first teaching efforts, are not in the way of educational progress and teaching effectiveness. Methods of instructions are changing from year to year and it is necessary that teachers keep abreast of the educational advance both in professional learning and in general information if they wish to develop and maintain the maximum degree of usefulness in the schools.—*Supt. Henry B. Emerson.*

Notes and News

Mr. James A. McCaig, M.A., LL.B., has resigned his position as Superintendent of City Schools, Edmonton, Alta. Mr. McCaig has held this position for seven years and has been very active in educational work in Alberta. He is secretary of the Alberta School Trustees' Association, past president of the Provincial Educational Association, and secretary of the Provincial Educational Council. He is also a member of the Senate of the University of Alberta.

Mr. Ira D. Bruels, B.A., of the staff of Pembroke High School, has been appointed Inspector of Schools for North Renfrew.

Mr. J. D. Campbell, B.A., formerly Principal of Chesley High School, has been appointed Master in Mathematics in the Stratford Normal School. He succeeds Mr. H. S. Robertson, M.A., who has entered business life.

Mr. R. H. Carbert of Alvinston Continuation School was elected president of the Lambton Teachers' Association for 1914. At the October meeting he delivered an excellent address on "Modern Methods in Geography".

Mr. A. R. Clarry, a recent graduate of the Faculty of Education, University of Toronto, is teaching in Alexandria High School.

Mr. Floyd Hartley and Mr. Milton Pfaff of last year's class in the Faculty of Education, Toronto, are teaching in the Public Schools of Brantford and London respectively.

Miss Mary Lemon, formerly of Elora High School, is teaching Science in Weston High School.

Mr. A. C. Rogers is now Principal of Markdale High School.

Mr. P. W. Brown, B.A., formerly Principal of Collingwood Collegiate Institute, has accepted at an increased salary the Principalship of North Bay High School. Miss Jean I. Eede, B.A., of Toronto will teach Science this year in Collingwood.

Mr. A. R. Girdwood, B.A., formerly of North Bay, is teaching this year in St. Catharines Collegiate Institute.

In accordance with the terms of an Act passed during last session of the Legislature, the following Continuation Schools became High Schools at the opening of this term: Avonmore, Chesterville, Amherstburg, Coldwater, Chatsworth, Dundalk, Durham, Flesherton, Morewood, Winchester, Thorndale.

Miss A. B. Neville, having completed her year's leave of absence, has resumed her work as Instructor of Household Science in the Stratford and London Normal Schools.

Mr. J. J. Thompson, Peterboro', has been appointed Director of Physical Training in the Normal School there.

Mr. T. M. Watson, Principal of the British American Business College, will teach writing this year in the Toronto Normal School.

We have received from Inspector A. Kennedy the accompanying illustration of the Grain Exhibit which was part of the School Garden Exhibition held at Midale, Sask., on September 18th and 19th.

A Course in Elementary Shorthand (Isaac Pitman) covering all the principles of the system, as taught in the standard text-books, will be given this winter in the College of the City of New York.

Thomas Nelson & Sons, Educational Publishers, of London and New York, have opened a branch in the Tyrrell Building, King Street East, Toronto. Mr. S. B. Watson is manager.

Mr. R. A. A. McConnell, formerly of the Peterborough Public School staff, has been appointed to the staff of the Lindsay Collegiate Institute.

Mr. T. H. McGuirl, B.A., formerly of St. Mary's, is teaching Commercial Work in Woodstock.

The following graduates of the class of 1912-13 of the Faculty of Education are teaching in the schools indicated: Mr. H. A. G. Willoughby, B.A., in Chatham Collegiate; Mr. W. W. Robbins, B.A., in Midland High School; Miss Hally Johnston in Glencoe High School; Miss Helen Kirkconnel in Gravenhurst High School; Miss Margaret Cordingly in Hawkesbury High School; Miss Evelyn D. Kellock, B.A., in Essex High School; Mr. T. W. Martin in Fergus High School; Mr. C. A. Vickery in Dufferin Public School, Toronto; Mr. H. W. Gerhardt in Streetsville High School; Mr. J. B. Symington, B.A., in Napanee Collegiate; Mr. O. F. W. Ellis, B.A. in Ottawa Collegiate; Mr. W. F. Hiscox in Stratford Collegiate Institute; Miss Elsie Affleck in Vankleek Hill Collegiate; Miss Irene M. Currie in Alliston High School; Miss Edith G. Gibson in Belleville High School.

Some of the appointments made at the opening of the present term are: Miss K. P. Ford from Niagara Falls South, to teach Art in Clinton Collegiate Institute; Mr. A. C. Haynes from Athens High School to

Brantford Collegiate; Miss B. R. Humphries from Acton Continuation School to Guelph Collegiate; Miss M. Hubner Smith to Brantford Collegiate; Mr. N. E. Challen, B.A., from St. Mary's to Perth; Miss S. M. McBride from Midland to Peterboro'; Mr. A. H. Irwin from Bruce Mines to Renfrew; Miss A. B. Stone from Woodstock to St. Thomas; Miss M. Carnan, M.A., from Morrisburg to Seaforth; Miss Julia M. Weir from Durham to Smith's Falls; Miss Annie Bates from Merrickville to Smith's Falls; Mr. Carl Y. Connor, B.A., from Brantford to Woodstock; Mr. S. A. Hitsman, formerly Principal of Athens Model School, to Athens High School; Miss Pearl Payne from Smith's Falls to Athens; Miss Louise E. Ney from Winchester to Athens; Miss Muriel B. Ferguson from Glencoe to Aurora; Mr. Carl S. Browne to Bowmanville High School; Miss Ella S. Hawkes, B.A., to Bradford High School; Mr. T. J. Hicks from Jarvis to Caledonia; Miss U. M. Harris and Miss M. W. Humphries of Bothwell to Chesterville; Miss M. D. Robertson from Renfrew to Carleton Place; Miss E. J. Cowan, M.A., from Carleton Place to Dundas; Miss Mabel Farrington to Dundalk High School; Mr. R. H. Archibald from Guelph to Dunnville; Mr. H. A. Percy from Wingham to Dunnville; Miss Bessie Arkell, B.A., from Moulton College to Durham High School; Miss Clara Hulse from Wallaceburg to Flesherton; Mr. W. B. Brown, B.A., from Napanee to Forest; Mr. E. D. Manning to Georgetown; Miss Hughena Campbell to Grimsby; Miss Mary I. Watson from Niagara-on-the-Lake to Hawkesbury; Miss Jessie S. Kirkpatrick, B.A., and Mr. W. A. Campbell to Iroquois High School; Miss Frances B. Johnston to Kemptville High School; Mr. John Tanton, B.A., and Miss Etta M. Stewart, B.A., to Kincardine High School; Mr. J. H. Adams, B.A., of Orangeville, Mr. W. J. Lamb, M.A. of St. Thomas, and Miss Eleanor Kent of London to Harbord St. Collegiate Institute, Toronto; Mr. J. D. Morrow, St. Mary's, and Miss Annie E. Barr, Kincardine, to Humberside Collegiate, Toronto; Mr. H. E. Bicknell, Niagara Falls, and Miss Rosalie Dugit, Belleville, to Parkdale Collegiate Institute, Toronto.

Miss Florence I. Fraser, formerly of Calgary, has been appointed to the staff of the Normal School, Camrose, Alta.

Miss Margaret H. Abel, formerly of Drayton, is now teaching in New Hamburg.

Mr. F. McConnell is now Principal of Brighton High School.

Mr. Frank D. Wallace, M.A., formerly of Vankleek Hill, is teaching in North Bay High School.

Teachers may secure a number of copies of a very interesting booklet "Jack" by writing the G. & C. Merriam Co., Springfield, Mass., and mentioning THE SCHOOL.

TO THE ART TEACHER

ART is making such rapid strides in Canadian Schools at the present time that the methods of teaching have to be constantly improved to keep up with its progress.

Many valuable suggestions can be obtained from the use of up-to-date, practical **Text-Books**, and in this respect we can be of some assistance to you. We have carefully studied the syllabus of the Ontario Education Department contained in

Appendix C
"Regulations and Courses of Study of the High Schools and Collegiate Institutes,"

and a classified list of books has been prepared to meet the requirements.

The selection we have made is compiled from the works of many well-known authors, who are authorities on their particular subjects. Individual tastes have been anticipated as far as possible and a choice of several books given under each heading. The list is too long for inclusion here, but it will be well worth while to obtain a copy.

Write us to-day, and if you are interested in any other equipment, mention the fact in your letter.

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The principalship of the Keewatin Continuation School, rendered vacant by the resignation of Mr. Wm. C. Rogers, M.A., has been filled by the appointment of Mr. Wm. T. Baker who held a similar position at Chesterville, Ont.

QUEBEC

Mr. Christopher S. Summers, formerly of the Kenmore Continuation School, has been appointed principal of the Continuation School at Stouffville to succeed Mr. W. J. Osborne.

Recent appointments to the staff of the Macdonald College School for Teachers include: Mr. G. A. Stanton, L.R.A.M., A.R.C.M., as lecturer in Music; Miss Winnifred Thompson as instructress in Art; Miss Ethel A. Roberts as assistant in Physical Training, and Miss Alice A. Brounrigg as Specialist in French in the Practice School. The session opened in September with one hundred and seventy students in attendance.

The Department of Public Instruction has continued its campaign on behalf of the Protestant rural schools of the province. Over fifty meetings were held in October, in small Protestant communities throughout the province, and the necessity for better schools was urged. "Qualified Teachers and what they mean to the Community", "The Duties of School Commissioners", and "The Benefits of Consolidation" were among the topics discussed. Dr. Parmelle, Inspector-General Sutherland, and Inspector Parker had the propaganda in charge.

The Annual Convention of the Protestant Teachers of Quebec was held at Sherbrooke on October 16-18th. This is the first time for many years that the convention has assembled elsewhere than in Montreal. One of the most helpful parts of the program was a series of French lessons taught by Mr. Robert of Montreal. His class was composed of children about seven years of age, all beginners in the language. After four lessons, the children had learned the French names for fully thirty common objects; they had learned to understand and obey over a dozen sentence-instructions, and had mastered the first five simple vowel sounds. The teacher who saw, surely got a revelation of what may be accomplished, and an inspiration which will last. It is proposed to hold the Convention next year at Quebec, and the historical interests centred in the city will doubtless contribute a great deal to the success of the conference. Principal McBurney of LaChute Academy was elected president of the convention for 1914.

UNITED STATES

The high cost of living and related problems are attacked in a series of home economics lectures at the Teachers' Training College in Baltimore. The following are a few of the practical topics considered: What is the food requirement for one day for a young woman 17 to 20 years of age? A study of actual lunches that can be prepared for 3 cents and

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BOSTON.

5 cents. The value of pure food. How does the sanitation of the school affect the health and efficiency of the child? How can we as consumers influence economic and sanitary conditions by careful buying?

Grand Rapids, Mich., has a printing department in the Junior High School. It is for three distinct classes of students: First, the part-time boy who attends half a day a week without loss of pay from his regular employment; second, the boy who is there all the time and is learning the trade; third, the boy who takes an hour or two a week to find out whether he wants to follow printing as a life-work.

Doing His Best.—It was a hot sultry afternoon, and the boys in the class were all fidgetting and lazy. This only made the master irritable on account of the heat, even more irritable.

Johnny Brown was reading aloud, and reading very badly.

"The captain," he declaimed, stumbling painfully over the words, "as he stood on the bridge as the big ship ploughed her way through the fog, suddenly espied a—"

Johnny paused. The next word was altogether too much for him.

"B-b-b-ba—" he stuttered.

"Get on, Brown!" said the master.

Brown got on.

"B-b-b-ba—" he continued.

"Barque, boy!" roared the master.

"Barque!"

Johnny glanced pitifully round the class-room—then at the master, then at the book. Then he opened his mouth and:

"Bow-wow!" he replied. "Bow-wow!"—*Educational Review.*

A small girl was engaged in embroidering the motto "Feed my lambs" on a book-marker. After completing "Feed my" she discovered there was room for only four more letters. "Mother," she said plaintively, "can you tell me the name of an animal with four letters?" Then brightening up she said, "Oh! I know, 'Cats' will do."

A teacher-in-training in the course of a spelling lesson was trying to develop the word "nuisance". "Now, Cecil," said she, "if some one asked you to do something which you did not care to do, and kept on asking you time after time, although you had refused, what would you call him?" Said Cecil, "An agent".—*Happened in the Faculty of Education, Toronto.*

THE COMING OF THE WHITE MAN.
By G. A. Reid, R.C.A., Principal, Ontario College of Art.

Let therefore your Rules to your Son be as few as possible, and rather fewer than more than seem absolutely necessary. For if you burden him with many Rules, one of these two things must necessarily follow; that either he must be very often punished, which will be of ill consequence, by making Punishment too frequent and familiar; or else you must let the Transgressions of some of your Rules go unpunish'd, whereby they will of course grow contemptible, and your Authority become cheap to him. Make but few Laws, but see they be well observ'd when once made. Few years require but few Laws, and as his Age increases, when one Rule is by Practice well establish'd, you may add another.

Locke—*Some Thoughts concerning Education.*

The School

"Recti cultus pectora roborant"

Editorial Notes

School Books.—The school book problem is once more to the front in the United States. On every side the old cries are heard—poor scholarship, bad printing, excessive cost, monopolies and graft. Each State is groping about for a solution of the problem. As yet most States leave the school door wide open that all publishers may go in and sell what books they may. Some States have gone a little farther and select uniform sets from books already on the market. A few States, a very few, go still farther and both select and publish their school books. But no State is quite content with its solution.

From the general discontent has sprung a new interest in the school book situation in other countries, particularly in Canada. Many requests for information have come to Toronto, and recently, on invitation, Dr. Goggin, the editor-in-chief of Ontario's school books, explained the Ontario system to the Educational Association of the Southern States at Nashville.

Neither the bookmen nor the schoolmen at Nashville could understand the excellence as well as the cheapness of the Ontario books. Cheapness, as Dr. Goggin was able to show, was an inevitable result of the Ontario system. There was uniformity in use throughout the Province. Each authorised school book had full control of the market. There was simplicity in the method of selling. A book in control of the market would sell without the assistance of expensive machinery. As all authorised books sold freely, the bookmen had no unsuccessful school books and were not forced to recoup their losses out of big prices on authorised books. Sailing in safe seas they were content with small profits. Above all the right to publish was bought in the open market. Bookmen competed in not only producing a good book but also in reducing the selling price as near the absolute cost as possible. It was due to this system that the Nashville bookmen believed the selling price to be in some cases below the absolute cost and always perilously near it!

But excellence is not sacrificed to cheapness in the Ontario system. Dr. Goggin was able to point out how many and how effective were the checks upon inferior books. The contract for the publication of any

book defined with great minuteness the material and the workmanship, and the editor's office was equipped to enforce those details to the letter throughout the term of the contract. The contents of the book were guaranteed by the Department of Education. It selected the expert or experts who were to write, edit, or illustrate the book, and the experts who later should revise it. In preparing and revising the book it had the assistance of its own expert officials and of the Advisory Council of Education, a body of educationists elected by the teachers of the Province. When fully revised, the book was put through the press by the editor-in-chief.

Unwittingly perhaps, Dr. Goggin's address was a reply to an article by Mr. C. H. Thurber in the September *Outlook*. Mr. Thurber seems to speak for the publishers. The school book, he says, plays a big part in the life of an American boy. The American teacher, unlike the English teacher, is a man with a book. American school books, he claims, are cheap. They cost the American people not more than $1\frac{1}{2}$ per cent. of the total cost of public education; in fact, "they cost the nation less than chewing gum". And they are good—"the best text-books on earth". And they grow steadily better and cheaper—better publishers, better authors, better illustrations, more accurate, more modern. In the last quarter century they have decreased in selling price at least ten per cent.

No doubt all this is true. But Dr. Goggin could cite figures to show that during the last ten years the selling prices of Ontario's school books have been cut in two and could point to Ontario school books which, while not one whit inferior in contents or workmanship to American books, sold at one-third the price!

School Records.—In his December article in this journal, Dr. Silcox urged the need of weekly and monthly records of class-room progress. An inspector writes, emphasising the same need. He declares that the average professional life of the Public School teacher is now less than seven years, and that the average of the rural school teacher is less than three years. "Indeed", he adds, "of the 65 teachers in my rural schools last spring, more than 30 left the inspectorate in midsummer." If this condition holds everywhere, one-half the teachers in rural schools change posts each year and all change in two years. The new teacher loses at least one month in becoming acquainted with the classes and their standing in each subject. This loss, suffered by very many rural schools annually and by many low-salaried schools twice annually, becomes in the aggregate a very serious charge against the progress of the rural school. Well-kept school records which place the new teacher at once in possession of information as to the classification and standing of the students will greatly reduce that loss. Shall we not create those records?

Spelling and Writing.—In the effort to relieve the pressure upon the High Schools of Ontario the new Regulations have transferred several subjects to the list of options. In the letter of the law spelling and writing have not been classed as options, but as they are to be taught only "when necessary", they have become options in the spirit. When are they necessary? Assuming for the results of the High School Entrance examination both efficiency and uniformity—and under present conditions this assumption becomes a certainty—uniform competency in spelling and writing prevails throughout the first forms of the High Schools. Spelling and writing then should be everywhere unnecessary —or everywhere necessary. Who, moreover, is to say that spelling and writing are necessary? Obviously not the inspector. A hurried visit, an excited student body, and tests few, abrupt and novel will not provide the safest criteria. To declare these subjects necessary upon such data would be scarcely less happy in results than the practice of submitting definite figures as to failures and successes in the inspector's tests in reading, writing and spelling to School Boards who misinterpret the significance of those figures. No, the principal alone is the safe judge, and he, it must not be forgotten, is the dominant figure in the Entrance Board which a few weeks before declared those first form students competent in writing and spelling! To say that spelling and writing are to be taught in the High Schools "when necessary" is equivalent then to saying that they have become options. This decision of the Department of Education most High School teachers will heartily endorse.

School and Farm.—The Toronto *Globe* publishes on Wednesdays an excellent series of articles on farms and farm life. These articles reveal a very reasonable and very modest conception of the relations of the Public Schools to the farm. An unreasonable conception regards the Public Schools as the one cause of the movement of the rural population towards the cities and the one hope of the movement back to the farm. In truth the Public School does not educate, and has never educated, people away from the farm. The townward movement is a natural economic movement. It prevails in countries where there are no Public Schools and is most marked among people who are illiterate. And it is not the primary duty of the Public School to bring people back to the farm. The Public School even in the country trains for life itself, and all attempts to narrow its function to training for the farm alone will work lasting injury to both schools and people.

This does not mean that agriculture is to be neglected in the Public Schools. It should be taught as a factor in the fulfilment of the main purpose of the school. School gardens, home plots, school fairs, nature study, agriculture and horticulture all assist in training for life itself, and all have their place in a properly constituted programme of studies.

But in that programme there are coequals, not superiors. Like other subjects they must serve, not rule, in time, emphasis, cost and public regard.

Discontent with Public Schools.—"When 500 girls between 14 and 16 years of age in Chicago factories were asked: 'If your father had a good job, so that he could have afforded to keep you in school, would you prefer to stay in school or go to work in a factory?' 412 replied that they would still prefer to be in the factory." This quotation has gone the rounds of the American press and platform and is still doing duty as the text for many a comment upon the Public Schools, their discipline, their courses of study, and their teachers. Many of those comments neglect such factors as the following:

(*a*) This is Chicago whose foreign-born population is so extensive as to make it a very uncertain model for the rest of America, and whose factory workers are not the typical workers of the farm-houses, villages, and other cities of this continent.

(*b*) These girls have passed the compulsory or Public School age, and entered the optional or High School age, where all youth longs to assume its burdens in the big world outside.

(*c*) At best the statistics tell us nothing about the schools. The answers to such questions are dictated by the question itself, by the suggestions of environment or by the action already taken by the girls.

Creative Art.—"The pupil's own effort to produce aesthetic compositions must thus be supplemented by the study and enjoyment of masterpieces; but we must not forget that still another supplement is necessary. The task which the child was to fulfil demanded a certain amount of technical skill in the handling of pencil and brush and, still more, an eye trained in the discrimination of forms and colours and light values. Special instruction in careful drawing from copies and models with pencil, charcoal and brush must be thus an additional feature of the instruction, and especially the drawing of small details in the room or in the landscape."—Hugo Munsterberg, "Principles of Art Education".

"There were great battles won on both sides, and there were valiant men on both sides in the war one hundred years ago, which was a war of misunderstanding; but I want to tell you of a victory that was won—a victory higher than any of these,—and that is the victory of one hundred years of peace, won by both sides."—Premier Borden at the celebration on Chrysler's Farm in August, 1913.

The High School Art Course

S. W. PERRY, B.A.
Faculty of Education, University of Toronto

TO the High School curriculum of to-day Art holds a relationship similar to that held by her sister study, Science, thirty years ago. To the teacher of the classics, English or mathematics, often in spite of his inadequate training to teach the subjects, was assigned the *task* of teaching physics and chemistry, generally with little or no laboratory or equipment. Little wonder it is that these were, as a rule, poorly taught. But despite opposition progress was made. The recognised value of the new department and the persistence of its advocates have changed the situation. Science has come into her own.

In the same way and with a similar handicap, Art is clamouring for greater recognition in the schools. The advances made in our national life demand the cultivation of taste and artistic skill among the people. Our national pride and necessities require that we no longer depend to so great an extent upon foreign countries or even upon Great Britain for either our pure or applied art. Because of its recreative, practical and cultural value art should be recognised in our schools as a subject of first importance.

To give it this status two things are needed, properly trained teachers and a more generous allotment of time. The Department of Education is doing all in its power to provide the former; the latter will come when more efficient teaching has proven to the public the educative merits of the subject.

How has the Education Department shown its interest in this subject?

(1) By giving it a place on the curriculum of every form of the Public Schools and by making it compulsory upon all in the Lower School of the High Schools, who seek admission to the training schools for teachers.

(2) By appointing to every staff engaged in training teachers competent instructors in art, and by requiring all candidates for admission to the teaching profession to pass a teacher's examination in art.

(3) By offering to teachers, gratis, special opportunities for art training at the spring and summer sessions of the Ontario College of Art, an offer enthusiastically accepted by 174 teachers of Ontario last year.

(4) By giving official recognition and financial assistance to the Ontario College of Art, which, under the able guidance of Principal Reid, is doing splendid work in the inspiration and training of artists and teachers of art.

In this connection reference should be made to the recently revised syllabus of art courses. It still covers much ground, but what advocate of the subject would desire it to cover less? It must be borne in mind that boys and girls who come to the High Schools have had already from eight to ten years in art in the Public Schools. As the teaching improves there with the expected increase in the number of trained teachers of art, entrance candidates will be better prepared and will appreciate a respectable course. The Education Department has shown good judgment in framing the art syllabus in the following particulars:

(1) It prescribes but three mediums, the pencil, crayons and water colours. The use of charcoal and coloured chalks is optional with the teacher

(2) It leaves optional the somewhat difficult work of drawing from the cast.

(3) It entrusts entirely to the teacher's judgment the order in which the various parts of the prescribed courses are to be taken. Appendix C is *not prescribed* either in whole or in part. It is, as it claims, intended to be suggestive. Many overworked teachers in the Continuation and smaller High Schools have neither the time nor the requisite experience to plan a course from the syllabus. To such the suggestions of Appendix C will be welcome.

(4) It recognises the four great departments of representative, reproductive, interpretative and creative art.

It surely would have been unwise to omit the last with its two main divisions of original design and imaginative or illustrative drawing. The measure of our success must depend upon our skill in systematically encouraging the creative spirit. All are acquainted with the spontaneous drawings of children. They will undertake to illustrate anything that interests them. This natural artistic faculty should be as carefully nourished by a right course of drawing lessons as is the language faculty by the rules of grammar and rhetoric. The result in each case is the same, the power of original expression, the one in line and tone and colour, the other in words and sentences and paragraphs. However crude the illustration, however defective the composition, if each is the result of honest effort it means more to the child than the perfect productions of a Turner or Corot, of a Scott or a Dickens. The same subject which inspires the pupil to produce an imperfect though praiseworthy exercise may inspire a finished artist to paint a masterpiece. Millet, the boy, smudging the white walls of the home with charcoal

sketches of Normandy shipwrecks and peasants at work, makes possible the maturer productions of Millet, the artist. The student through patience and under proper guidance

"Step by step, lifts bad to good,
Without halting, without rest,
Lifting Better up to Best."

The following are good rules to observe in setting and judging an exercise in illustration:

(1) Allow a wide range of subjects. Some pupils will excel in figure and animal drawing, some in landscape and others in marine views.

(2) Introduce the subject by an interpretative study of the passages or topics to be illustrated. Judicious questioning will accomplish this.

Figure 1.

(3) Insist upon a broad treatment of the subject with the omission of unnecessary details.

(4) Encourage the pupils to observe objects or scenes under conditions similar to those required by the passages to be illustrated. Does Holman Hunt wish to paint his great conception of the "Scapegoat", he leads an old grey goat to an environment in keeping with his thought and paints his masterpiece there. Mary Siddal floating in a bath-tub aided Millais in painting his conception of the drowned "Ophelia".

(5) Criticise approvingly where possible.

"And indeed the arm is wrong.
I hardly dare . . . yet, only you to see,
Give the chalk here—quick, thus the line should go!
Ay, but the soul! he's Rafael! rub it out!"

The accompanying half-tones were photographed from two illustrations selected from many handed in by a class of first year boys. The first is a water-colour painted by Gordon E. Munnoch to illustrate Longfellow's lines:

"The summer sun is sinking low;
Only the tree-tops redden and glow;
Only the weather-cock on the spire
Of the neighbouring church is a flame of fire!
All is in shadow below."

Figure 2.

The second is a coloured crayon sketch by Louis Girard to illustrate Hood's lines:

"I remember, I remember
The house where I was born,
The little window where the sun
Came peeping in at morn."

As a fitting conclusion the following may be quoted from the December number of the *School Arts Magazine*: "Illustrative Drawing is probably the most useful form of drawing in Public Schools, for it can be applied to so many of the school subjects. We have found this work well worth while."

The Education of the Foreigner

J. T. M. ANDERSON, B.A., LL.B.
Inspector of Schools, Yorkton, Sask.

THE steady influx of many thousands of immigrants from all parts of the civilised world has given rise to many serious and perplexing problems. Perhaps the gravest of these, all things considered, is the education of the rising generation among these various peoples so that they may have a knowledge of our language and a proper ideal of Canadian citizenship. The responsibility of solving this problem lies primarily with the Public School teacher. The difficulty of the undertaking and its importance to the future of the country demand of the teacher the utmost skill and sympathy. But the too general antipathy towards these foreign peoples has affected even the teaching body, and our provincial governments have been obliged to engage native teachers, even those without the regular qualifications. The natural result is the "bilingual method" of teaching the English language.

This article is intended as a protest against this "bilingual method". The writer has found from experience that more rapid progress is made when the teacher does not know a word of the child's language. In the case of some schools where the teacher's knowledge of English is slight the work of four or five terms may result in only a few disconnected English phrases, with no progress whatever in the direction of citizenship. In certain schools, moreover, half-a-dozen different languages are spoken by the pupils! Here is an example of what can be done in a school among foreigners by a patient and sympathetic English-speaking teacher. His experience is given in his own words:

"I am very firmly of the opinion", he begins, "that least progress is made where the teacher makes use of the language of the child even to the slightest degree. There is absolutely no need for it. For some years I taught among the Icelandic people in Manitoba, and thinking I could make more rapid progress if I knew something of the elementary principles of their language, I began to study it. Upon acquiring a knowledge of their everyday speech I made use of it with classes of beginners. Needless to say I quickly abandoned this method as I made much more rapid progress when I knew nothing of the language. I may add that I was the first English-speaking teacher they had ever had at this school, and when I left they at once began to look for an opponent of bi-lingualism, and the Icelandic people are our most enlightened class of incomers.

"After leaving Manitoba I took charge of a school in a large foreign settlement in Saskatchewan. I distinctly remember the long, dreary drive of twenty-five miles, through hail and slush, behind a patient

Fig. 1
Coming Canadians.

Fig. 2
Some more of them.

ox-team, as my secretary escorted me from the little railway siding. Long after the "midnight dreary" we pulled up before a low mud-covered hut which I supposed was his stable, but which I soon learned

was to be the joint abode of the man, his wife, four children and the new teacher. It was one small room, but it served as bed-room, dining-room and kitchen, besides having several other uses too numerous to mention. I shall pass over that first night. It is too painful to recall.

"Next morning I met my trustees, only one of whom, a Swede, was able to speak to me. Of the other two one was a Hungarian and the other a Pole. I ascertained that it had been proclaimed throughout the neighbourhood that I was to open school that morning, and I further learned that it was a new school and they had never had a teacher before. I was informed by the Swede, a very genial fellow, that most of the people had never seen a Canadian teacher, and he smiled as he added that there were seven nationalities represented in the district.

"I did not eat much breakfast, I couldn't. My environment forbade it. If I had had enough cash to accomplish the feat I would have taken the first train East or even farther. But I resolved to try and do my duty for a time at least. Upon my early arrival at the schoolhouse I found that several sleigh-loads of people had got there before me, and upon entering the room I found over fifty boys and girls standing around the box-stove. The parents stood around the door and all eyed me curiously. One or two of the more enlightened said 'Good-day, meester', which was practically their entire fund of English.

"After some little difficulty I persuaded the parents that they were to go home, and then I turned to my prospective pupils. After I had them all seated I took my place before them. I soon learned that over forty of them knew absolutely no English, not even 'Yes' or "No'."

Space does not permit a detailed description of the excellent work of this teacher, but reference must be made to the general results of his efforts. The feeling of aversion soon wore off and he became intensely interested in teaching these children English. In a few days they were making use of English sentences, executing commands and playing games. At the same time filthy clothing was discarded and the little girls began to appear in cleaner dresses. The boys now made free use of towels, soap and combs, and instead of the huge "chunks" of bread in a filthy rag, there soon appeared neatly wrapped lunches, with the bread carefully sliced. Thus the work went merrily on! The enrolment reached over sixty in three months.

Then came a grand union picnic of the six or seven schools in the vicinity. A large parade was held and the pupils of the school mentioned won first prize for the best marching and general appearance! How proud those parents were! The accompanying cut shows the group of over two hundred children, representing over a dozen nationalities. The six English-speaking teachers are sitting in front, and each child proudly waves a Union Jack. A great many Canadians were made that day!

After summer vacation the teacher referred to returned to the now beloved work with renewed vigour, and the fall term culminated in a grand concert on Christmas Eve. Over forty items appeared on the programme, and over forty children read, recited, took part in dialogues or sang, and *every word used belonged to the English language.* It was quite interesting to listen to seven boys, each reciting a verse from "The Choice of Trades", and each boy belonging to a different nationality. At the conclusion of the programme a beautiful Christmas tree was robbed of its presents and many a little heart thereby made glad. Then came the national anthem by these little coming citizens, and as they lustily sang, their more or less ignorant parents looked on with smiling faces.

Thus in about nine months these children obtained a good working knowledge of our language, were given an insight into the social side of Canadian life, and were started on the march upward. All this happened about four years ago, but this good work is going on still, and one Polish boy from this original class obtained a third class teacher's diploma this year.

Fig. 3
"A great many Canadians were made that day."

Fig. 4
A typical rural school in a foreign settlement in Saskatchewan.

This incident, not uncommon in the West, emphasises the contention that only the English-speaking teacher can inculcate the ideas so essential in laying the foundation of true citizenship in Canada. The foreign teacher in many cases cannot be expected to do this. Within a few miles on every side of the above district are foreign schools that have always been under foreign teachers, and except for a barely noticeable ability to speak a little English nothing has been accomplished. And after all, the ability to *speak* our language is the least important part of the educational problem!

Railways of Canada

(Concluded)

W. J. THOMSON
Principal, Brown School, Toronto

The Canadian Northern.—The Canadian Northern began business in Manitoba about Christmas, 1896, with a hundred miles of line running between Gladstone and Dauphin. The equipment of this line consisted of three locomotives and 18 cars. Two trains a week each way formed the schedule. As Sir Donald Mann says, "There was no danger of a collision". The staff consisted of 13 men and a boy, and the monthly pay roll was $500. The gross revenue was $60,000, which was sufficient to provide a surplus over working expenses. When the twentieth century came in 307 miles were being operated. A few months later control was obtained of 350 miles of line in Southern Manitoba that had been built by the Northern Pacific Railway of the United States. In 1902 access to Lake Superior was obtained, and the road was fairly launched on its progress as the second railway in Western Canada with the certainty of becoming a transcontinental.

The main line from Winnipeg to Edmonton (*via* Portage la Prairie, Gladstone, Dauphin, Humboldt and Battleford) was completed in 1905.

In 1906 by the acquisition of the Qu'Appelle, Long Lake and Saskatchewan Railway entrance was gained to Saskatoon, Regina and Prince Albert. The method of securing control of this line illustrates the enterprise of the Mackenzie-Mann Company. For fifteen years the road had been leased to the Canadian Pacific and everybody thought that the lease would be renewed. One morning Sir Donald Mann got wind of the fact that possibly the lease might go elsewhere. In the afternoon of the same day he had closed the deal involving millions of dollars and had taken over two hundred and fifty miles of very remunerative railway.

In 1907 Regina was connected with Winnipeg and 1908 saw the line from Saskatoon to Calgary begun as well as the first hundred miles on the way to Hudson Bay. Each succeeding year has shown a marked increase in the mileage until to-day 4,552 miles are being operated by the Canadian Northern.

When completed the main line will provide a second transcontinental. Its eastern terminals will be Pugwash, N.S., and St. John, N.B. Proceeding westward from Pugwash the line crosses the southern end of

New Brunswick, passing through Moncton and Fredericton, from which point a branch runs southward to St. John. From Fredericton the line crosses northern Maine and reaches the St. Lawrence River at Levis opposite Quebec. The bridge now under construction near that city will afford access to the northern shore of the river along which the line continues to Montreal. Westward to North Bay it parallels the Canadian Pacific. At this point it swings to the north and runs through northern Ontario about 50 miles north of the Canadian Pacific (main line) until it reaches Nipigon. Thence to Fort William it runs close to the same line. Through Rainy River District the line is close to the international boundary, which is crossed south of Lake of the Woods, and for a short distance traverses Minnesota, entering Manitoba at the south-east corner and on to Winnipeg. From Winnipeg the main line runs *via* Portage la Prairie, Gladstone, Dauphin, Humboldt and Battleford to Edmonton. From this point it will run to Port Mann, B.C., *via* the North Thompson and Fraser Valleys.

With the completion of the line between Edmonton and Vancouver, and another stretch between North Bay and Ottawa, both of which are well under way, the Canadian Northern will be able to go under its own steam from tide water to tide water. Until the completion of the bridge across the St. Lawrence at Quebec that city will be the eastern terminal.

In Ontario the Mackenzie-Mann interests have been very active. One line runs northward from Toronto for more than three hundred miles to Moose Mountain iron mines by way of Key Harbor on Georgian Bay. Another line extends eastward to Ottawa and Montreal. In order to secure an entrance to Montreal a tunnel is being constructed through Mount Royal at an estimated cost of thirty million dollars. In addition to the line from Ottawa to Montreal and Quebec an important branch runs northward tapping the Lake St. John district.

In Nova Scotia the Halifax and South Western (now owned by Mackenzie-Mann) connects Halifax and Yarmouth. It also crosses the province to the Bay of Fundy and has a branch down the Annapolis Valley.

Like its rival the Canadian Pacific it has not stopped with the shores. In addition to boats on inland waters two fine ocean liners —the *Royal Edward* and the *Royal George* —plying between Bristol and Montreal, fly the Canadian Northern colours.

The story of the Canadian Northern is the story of two of the most picturesque and constructive figures in the Dominion—Mackenzie and Mann, both of whom are Ontario born. Single-handed they have built the Canadian Northern system, a performance without a precedent in the annals of railway construction. And what is equally remarkable they still own it. It is a rare thing to find the actual builder become the

owner. Generally the speculator outgenerals the man who drove the spike. So it was with the Union Pacific and other systems, but this extraordinary pair have developed a vast "made and operated in Canada" property. A comparison with the other two Canadian transcontinental lines will show this.

The Canadian Pacific, save for what was contributed by the daring Strathcona, was built and is operated by Yankee brains. Both Sir William Van Horne and Sir Thomas Shaughnessy, despite the handles to their names, are American born and bred, and graduates of the Chicago, Milwaukee and St. Paul. The Grand Trunk was brought to its present high standard of efficiency by the late Charles M. Hays, who was American also. It was in his fertile mind, we shall see, that the Grand Trunk Pacific originated.

Mackenzie and Mann afford a spectacle of splendid team work. They supplement each other much as the blades in a pair of shears. Yet they are exactly opposite in temperament. Sir William Mackenzie is the financial genius of the combination, while Sir Donald Mann's work has been that of the builder. His judgment is almost unerring. Before he built the road from Calgary to Edmonton, it is said he rode over the rough country once, and his estimate of the cost per mile was only $23 less than the actual price of construction. He has had no technical training, yet he is said to be one of the best engineers in Canada.

Mackenzie is the in-door man of the combination. His place is at the leather-topped boards where millions talk. In Lombard Street and along the money lanes of the world they know him well. He always returns from England full-handed; and the reason is, once he starts out to get a thing he never lets up. He has led many a forlorn financial hope to triumphant conclusion. He does not know what the word surrender means.

The Grand Trunk Pacific.—As previously stated it is largely due to the efforts of the late Charles M. Hays, president of the Grand Trunk, that the third transcontinental was undertaken. The Grand Trunk approximated between 6,000 and 7,000 miles of railway and spread to every corner of Southern Ontario, but it was insulated. Rival lines had been permitted to spring into existence and to form a barrier on all sides, hemming in the pioneer line. A great proportion of the revenue accruing from through transportation of passengers and merchandise had to be paid out to competing lines for the conveyance to points beyond the zone in which the older lines operated. The effect of this disadvantage was very heavy, as the West with its enormous traffic was forging ahead rapidly and here the Grand Trunk had no lines. The encircling competitive and strangling barrier of lines must be broken

down, and the necessity for handing traffic over to rivals must be reduced to a minimum. They were in touch already with the Atlantic and why should they not have an arm resting on the Pacific?

Mr. Hays suggested the building of a new transcontinental railway, stretching from coast to coast, running through new territory entirely and capable of being linked up very easily with the network in Southern Ontario. At the same time he emphasised the necessity for establishing a new port on the Pacific which would offer unrestricted scope for future developments. The Canadian Government looked with favour upon the proposal, and in October, 1903, the Grand Trunk Pacific was incorporated and an agreement entered into between the Company and the Dominion Government to construct a line from Moncton, N.B., to Prince Rupert, B.C., wholly within Canadian territory.

The railway comprises two grand divisions, namely, the Eastern Division and the Western Division. .

The Eastern Division embraces the 1,804 miles between Moncton and Winnipeg. After leaving Moncton the railway has to follow a somewhat circuitous route through New Brunswick in order to gain Quebec, owing to the State of Maine thrusting its boundary so far northward towards the St. Lawrence River. Had it been possible to cut across this intercepting territory the mileage between the Atlantic seaboard and the river ports would have been reduced very materially, but the line was advocated as an "All-Red Route", and consequently it was forced to make a huge bend to skirt the political obstruction. When it crosses the St. Lawrence, which it does a few miles above Quebec, it runs north-west, passing through an absolutely virgin country for about 1,300 miles, where lumber, minerals and land adapted admirably for diversified farming exist in abundance. Westward from Lake Nipigon for a distance of 200 miles to the prairie is an unproductive stretch. The main line of this Eastern Division will be constructed by and at the cost of the Canadian Government, under the supervision of the Commissioners of the Transcontinental Railway, and upon completion will be leased to the Grand Trunk Pacific for a period of 50 years on terms that have been clearly defined. A branch from the main line running in a south-easterly direction to Port Arthur, where connection is made with the boats for Georgian Bay and Lake Huron ports, is now completed and being operated.

The Western Division—Winnipeg to Prince Rupert, with branches, —will be built by the Company, the Canadian Government guaranteeing the principal and interest for 50 years of three-quarters of the cost of the main line from Winnipeg to the coast. The main line mileage is 1,755 miles. West of Winnipeg a vast treasure-house of grain is threaded for a thousand miles. It is estimated that there are between 200,000,000

and 300,000,000 acres of land suited to grain raising between Ontario's western boundary and the Rockies. Seeing that the Canadian Pacific draws a large proportion of its revenue from about 7,000,000 acres it will be recognized that there is room for the Grand Trunk Pacific, as well as the Mackenzie–Mann road. Upon leaving the Central Plain there intervenes about 170 miles lying among the mountains which are crossed at Yellowhead Pass, 50° north latitude. This pass has an elevation of 3,723 feet, being the lowest level at which this range is crossed by any railway. The Canadian Pacific has to climb to a height of 5,329 feet to get over the same wall in Kicking Horse Pass, and 4,427 in Crow's Nest, while the Union Pacific, the first transcontinental, toils to a height of 8,710 feet to overcome the selfsame barrier.

Beyond the Rockies is another excellent agricultural area for 450 miles, terminated by the Cascade Mountains. West of the Cascades the line for the last 100 miles follows the Skeena River to Prince Rupert. The territory, in addition to being rich in minerals, is said to be well adapted to fruit growing. For the sixty miles next the Pacific Coast the grade does not rise an inch, the line being as level as the proverbial billiard table. There is not a foot of what is known as surface line. The engineer has had to trim back the mountains where they kiss the river, hewing a narrow shelf twenty feet above high-water mark out of the solid rock.

In addition to Winnipeg, Portage la Prairie, Saskatoon and Edmonton (all on the main line), Brandon, Regina, Prince Albert, Battleford, Lethbridge, Calgary, Victoria and Vancouver will be reached by branch lines either under construction or proposed. A subsidiary company controls a fleet of modern steamships operating on the Pacific Coast between Prince Rupert, the western terminal of the railway, and Vancouver, Victoria, Seattle and other Pacific ports.

In addition to the five lines already described there are the Canada Southern crossing the Lake Erie counties, the Temiskaming and Northern Ontario, from North Bay to Cochrane, and others of more or less importance, making up about five per cent. of Canada's total mileage. Then, too, there are branches of the Great Northern and Northern Pacific crossing the forty-ninth parallel and tapping the southern portion of Western Canada.

There are, also, some fifty-four electric lines, varying in length from one and a quarter miles to two hundred and eighty-seven, with a total of 1,723 miles. Up to the present the application of electricity for traction power has been for local and suburban lines or for hauling trains through tunnels, to avoid the trouble and discomfort from the smoke and gases of the steam engine.

Then there is the Hudson Bay Railway now under construction. This is one of the most daring ventures in railway construction in the history of our country. No other such line has been built. Hudson Straits are said to be impassable for eight months in the year, but Liverpool is one thousand miles nearer the wheat fields of Saskatchewan and Alberta than by way of Montreal, and for the sake of what can be carried during the four open months the Canadian Government proposes to spend $25,000,000 to provide a new outlet.

How have these 27,000 miles of railway been built? Who is behind the venture and where did the money come from? The railways of Canada are worth one and a half billion dollars. Out of the national treasury were given money and lands with which the lines might be started, and contributions have been from three sources. The Dominion has given 154 million dollars, the various provinces 36 millions and the municipalities 18 millions; a total of 208 millions in cash subsidies. In addition to this land grants to the extent of 56 million acres have been made. Some slight indication of the value of these lands may be obtained from the fact that during 1911 the Canadian Pacific sold 975,030 acres of land for $14,469,445, or an average of nearly $15 an acre.

In recent years the assistance has taken the form of guarantees as opposed to cash or land grants. It is estimated that through guarantees, cash subsidies and grants of land the Canadian people have fed their railways with over half a billion dollars and fifty-six million acres of land.

As a whole the service of the railways has been helpful and efficient, but occasionally there seems to be a tendency on the part of the railways to act arrogantly in their relations to private property and to exercise a monopolistic desire in the matter of freight rates. Fortunately for the people the appointment of a Board of Railway Commissioners—an independent and permanent tribunal—in 1904, to stand guard for the public rights in all matters of railroad development and regulation, has proven to be a most helpful piece of railroad legislation and much is expected from that body in maintaining the rights of the people.

Lend a Hand.—The men who are lifting the world upward and onward are those who encourage more than criticise.—*Elizabeth Harrison.*

The blessed work of helping the world forward happily does not wait to be done by perfect men.—*Eliot.*

Teacher—I am going to send this to your mother, Johnny, and show her what a shocking composition you brought in to-day.

Johnny—All right; send it to her; I don't care. Me mudder wrote it, anyway.

Methods of Teaching Primary Reading

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THE most difficult problem that arises in the teaching of reading is the problem which meets the primary teacher on the very threshold of her task. The difficulties of the reading hour in the other grades are in a very real sense hers and to these is added, as if for good measure, the even greater difficulty that the child has as yet not acquired that independent and automatic word-recognition power without which the reading process, as a process, cannot normally go on. How to develop such power and at the same time have a method that is inherently fitted to induce the thought process is a problem that has taxed the utmost ingenuity of primary teachers of all time.

To set down all the answers which have been given to the above problem would require volumes.* There have been as many answers as there have been teachers. And of no time can this statement be more truthfully made than of our own; for example, the most thoughtful exponents of the phonic method are not 'with one accord in one place' with respect to their method. Surely such a condition is rather an omen of good than of evil for it at least proves that such teachers are endeavouring to be the masters and not the servants of their method. In order to give, therefore, any brief résumé of these answers one must necessarily strip them of their individual characteristics and speak of general types. I am aware that the advocates of these different methods will very quickly and very strenuously disown allegiance to such lifeless forms. In these discussions, however, I shall endeavour to let the spirit of the method and the form under which it originally appeared be my guides.

On the following page may be found a tabulated list of these generalised types. My purpose in putting them in this rather rigid and stereotyped form is (1) that we may see the logical development and evolution of the different methods, (2) that we may make a comparative study of their efficiency in solving the problem for which they originated.

I. Alphabetic Method.

1. *History.* The alphabetic method was used almost universally in Greece and Rome and other European countries until well into the 19th century. Likewise it was practically universal in America until about 1870. The writer was initiated into the mysteries of reading in

* For example, one answer may be found in "The Problem of the Primer" by Miss McKay in this issue.

METHODS OF TEACHING PRIMARY READING

ALPHABETIC.	PHONIC.	PHONETIC.	WORD.	SENTENCE.	CONCENTRATION.	COMBINATION.
6.	6.	6.	6. Clear ideas of object, etc.	6. Clear ideas of object, etc.	6.	6. Clear ideas of object, etc.
5.	5.	5.	5.	5. Sentences.	5.	5. Sentences.
4.	4.	4.	4 } Words.	4 } These sentences analysed into words.	4.	4. These analysed into words.
3.	3.	3.	3 }	3 }	3.	3.
2.	2.	2.	2.	2.	2.	2. The words
1.	1.	1.	1.	1.	1.	1. analysed into sounds.
1. *Names* of the letters taught in consecutive order.	1. *Sounds* of letters taught.	1.	1.	1.	1.	1. Sounds synthesised to
2. Nonsense syllables, *e.g.*, ab, eb, ib, ob, ub. spelled and pronounced.	2. As in alphabetic method except sounds instead of names used.	2.	2.	2.	2.	2. form new 3. words.
3. Monosyllables, *e.g.*, cat, rat, hat, spelled and pronounced.	3. As in alphabetic method, except, etc.	3.	3 } Words used in the reading of 4 } new	3 } Words used in 4 } reading of new	3.	
4. Dissyllables, etc.	4. " "	4.		5. sentences and	4.	4. These words
5. Words arranged to form sentences.	5. " "	5.	5. sentences and	6 stories.	5.	used in reading of new
6. Reading of stories.	6. " "	6.	6. stories.		6.	5. sentences and
		As in Phonic Method except that there are sufficient symbols to represent the sounds.	N.B.—See sec. 12, 13, 14, 15 of Manual in primary reading.			6. stories.

this way in the year 1888. And I am told that there are still a few remote nooks in the Province of Ontario where this is still the good old method. However, to the teaching profession of to-day it has little value except in an historical way.

2. *Steps.* See tabulated form.

3. *Merits.* It developed good spellers.

Defects. (1) It does not develop independent and automatic word-recognition power and hence fails to accomplish one of the real purposes for which it originated.

(2) A word is not the synthesis of letter names and hence spelling the word will give no clue to the sound of the word.

(3) The whole attention of the child is taken up with the *form* of the word rather than with the *thought* the words express. Therefore it is not reading.

(4) The use of unfamiliar and unmeaning syllables caused the pupil to treat the work in a mechanical and perfunctory manner. We see that the real purpose for which reading is primarily intended was not realised until about two years of this mechanical work had passed.

(5) It is a rigidly synthetic method. (In this connection see article by Dr. Slemon in the October number on "General Methods in Teaching'.)

II. Phonic Method.

1. *History.* Ultimately protests must arise against such an illogical and unpedagogical method. But as is the case in any course of development first one defect and then another would be seized upon. One of the first protests came from the Jansenists (Jesuits) of the Port Royal School. The point they seized upon was the illogical connection between spelling (*i.e.*, naming the letters) and the sound of the word. So they advocated a *substitution* of the *sounds* of the letters for the *names* of the letters. As a result we have a method springing up which exactly parallels the alphabetic method except in that one very important respect.

2. *Steps.* See tabulated form. (In this connection see Miss Niven's lesson as a particular example of the procedure now used.)

3. *Merits.* (1) It develops independent and automatic word-recognition power. In so far as I can understand the different methods it is the only one which does develop such power. And hence I do not see how any final method of teaching primary reading can wholly disregard the phonic method.

(2) Secures clear enunciation and distinct articulation.

Defects. (1) The advocates of the word method claim that a word is neither the synthesis of letter names nor of letter sounds.

N.B.—We shall point this out more fully in dealing with that method.

(2) The English language not being a phonetic language, the method has a tendency to produce poor spellers.

(3) (4) (5) As in the alphabetic method.

(6) There is a great discrepancy between the number of sounds and the number of symbols to represent those sounds.

III. Phonetic Method.

A mere mention of this method will suffice. It originated in the attempt to cure the discrepancy which exists between the number of sounds in the English language and the number of characters to represent those sounds. That each sound might have its own distinct symbol a sufficient number of new symbols were invented. This was accomplished by altering the shape, size, etc., of the different characters and above all surrounding them with such a mass of diacritical marks that the phonetic script puts the Hebrew script to shame. In their endeavour to cure one defect a much more serious one has crept in. The attention of the pupil is so taken up with the translation of the characters, marks, etc., that no attention is given to the grasp of the thought content. The method never found favour in the class-room and is not used to any extent at the present time.

Suggestion for the Class-room

Control.—On Tuesday morning, maybe, you are demonstrating a new principle to your B class. In the midst of it you call to John to stop looking out of the window, a minute afterward to Fred to make less noise with his paper; to Fordyce to study his spelling. You are annoyed and they see it. You have interrupted your own teaching because you *allowed* those children to annoy you. You experienced the disorder on Tuesday and corrected the boys individually. You will have the same opportunity on Wednesday, on Thursday and on Friday.

More than that, the opportunities will increase because disorder and unrest spread. The inattention will become seated. Week after week will go by because *you didn't begin right.*

Let us eradicate these troubles at once and then proceed. First, be thankful that you *can* be annoyed or disturbed or rendered uneasy. If you cannot be made uncomfortable, your case is hopeless.

If teachers would *insist* on order and system, there would be no need of these continual interruptions—we might say irritations. Give those children to understand just once what they are expected to do, and then at the first sign of anything wrong, stop all lessons, and make them see it is a serious offence. Do not expect a repetition, but if one should come, then is the time to make an example of it. Act, and act firmly.—Sara Potter Paine, in *Normal Instructor.*

The Problem of the Primer

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THE subject of *Reading*, especially in the Primary Grade, has presented many difficulties to the inexperienced teacher, and these difficulties have apparently increased since the introduction of the Primer.

When it was first introduced, we all with one accord began to complain—chiefly because it was so completely different from the former books, and at first seemed to demand more time on the part of the teacher, and more development on the part of the pupil, than was forthcoming. But, like all things new, its first terrors were the worst; and after a time some of its good qualities began to manifest themselves. One of the most important of these is the quality of the reading matter, which is, undoubtedly, of much greater interest than that contained in the old books. This is a matter of importance for when a child is interested our teaching becomes comparatively easy.

The object of this article is to give an outline of a method whereby the Phonic System may be successfully used in connection with the Primer, and to make this outline as practical as possible by entering somewhat into detail.

The teacher's earliest task is to so win the affection and confidence of the child that he will talk freely to her on all his childish subjects, in which she must show the keenest interest.

We must make haste slowly at first, and have our lessons brief and very interesting. It is necessary to begin with objects with which the child has been associated in the freedom of his home life until he is thoroughly convinced that "the schoolroom world" is a pleasant one.

For this reason our reading lessons at first must be based on words which are the names of very familiar objects which may be seen and handled in the class, *e.g.*, *cap*, *top*, *bell*, etc. Have the object brought into the room; let the pupils examine it. Encourage them to tell anything they wish concerning it, until a lively interest has been kindled. Then carefully write the word on the blackboard. telling the children that the chalk is going to say the word. Write it in various places, sizes and colours, having the children name. Many devices may be used to aid in the recognition of words. One which gives much pleasure is to make lists of words with the new word mixed in with other words, allowing the pupils to *erase* any word which is *not* the word named. This teaches them to observe closely while they are conscious only of a very interesting game. They may then be allowed to write the word in the air, while the teacher writes it on the blackboard; also they may trace it in coloured chalk, and finally may try to copy it, while the teacher may help somewhat by giving such directions as *up*, *around*, *up*, *down*, etc. Though the first attempts are very crude, yet just a little kindness, sympathy and patience on the part of the teacher will aid in the accomplishment of wonders.

In a way similar to the preceding, several words should be taught. Small changes may be made to suit the individual word. At first only *one* new word a day should be attempted and each lesson should be made into a pleasant game, for the child can be taught a great deal if he thinks he is playing. These words, with many others, may be called key-words, and perhaps at this point we may form an outline of work which may be useful in teaching the first part of the Primer and in the teaching of reading itself.

I. Teach several words to be used as key-words. These need not be all chosen from the Primer though they may with advantage be taken from this source. These key-words may be divided into three classes: (*a*) Names of common objects, and one or two proper names. Examples: cap, hat, top, hen, boy, fan, Sam, girl, Tom, sheep. (*b*) A few action words, *e.g.*, hop, run, jump. (*c*) Words necessary in the building up of sentences. Examples: I see, it is, is it, and, do (Do), the, The, ox, at, you, You, my, My, has. The foregoing words may be taught by means of objects, stories or any other method by which they can be made real to the child.

They should be kept on the blackboard in colours, and reviewed carefully from day to day, changing the places of the words and being very watchful, lest the children learn them in a particular order, without knowing them when placed in a sentence for future use.

This accomplished, we may proceed to the second step, namely—

II. *The Analysis* of these words: *cap* may be broken up into *c . . . ap; hat* into *h . . . at; top* into *t . . . op*. This process may go on until all the key-words which can be suitably broken up have been separated into two parts. There are, however, some of the words which are really not Phonic, as we think of Phonics in the earlier stages, at any rate, *e.g.*, do, the, you.

While these words have been in the process of teaching, we have been wise enough to present to the child very early in his school life, the *particular* words which are most useful in building up sentences, for he delights in being allowed to find out what the chalk has said, and whisper it to the teacher, after which, as a reward, he may be allowed to tell the story to the whole class.

Let us now summarise:

(*a*) The foregoing words have been taught by the "Look and Say" method, the Sentence method, or any other chosen by the teacher.

(*b*) The Phonic words have been broken up, not into all their parts at present, but into two parts, separating the first sound from the rest of the word. Later on, when the child begins to grasp the significance of the process, the second part may be again separated into its component parts, and the child shown clearly that the word which he thought to be all in one piece is, in reality, composed of two, three or more parts.

But this process may have presented difficulties which the following suggestions may help to clear away:

1. The teacher may pronounce the word slowly, and while doing so, write it on the blackboard, keeping the chalk working at the same pace as the voice—first separating the parts very little, then gradually more and more until the parts are very distinct, as: top . . . t - - op . . . t - - -op, . . . t - - - - op, . . . t - - - - - op.

2. Next have the children help to say it slowly, while they watch the blackboard and observe the parts as the teacher points.

3. Then have them point to the parts as the teacher names. Have several children do this. Have the word and sounds in various places, types and colours.

4. The pupils may now find the sounds in other words without the teacher's help.

5. Next these sounds may be mixed up and the children asked to point, as the teacher names quickly, or the opposite.

Keep these sounds in constant review, just as the key-words have been kept.

We have now reached the third important step, namely—

III. *Synthesis*, or building process:

We have a number of key-words for a foundation, and quite a supply of sounds (c, h, t, m, b, s, f, g, r, sh; also ap, at, op, en, an, oy, am, ul, om, un, ee, as, up).

(*a*) Take our first key-word *cap*: c - - - - - ap. Begin at once to *substitute* for "*c*" any other sound which is familiar to the child, keeping the last sound "*ap*" in white chalk, while the changed sound is written in various colours. We get such a list as: cap, map, gap, lap, rap, sap, tap.

In a similar way we get from the second word: hat, mat, pat, rat, sat.

To continue this, we have: top, hop, mop, sop, pop; hen, ben (*Ben*), ten, men; man, fan (previously taught), pan, ran, tan, etc.

Soon a large number of words have become familiar, and as they are learned, they should be put into stories, and used for reading, making sure that the meanings are clearly understood.

(*b*) However, many teachers encounter serious difficulties, in trying to get the pupils to combine these sounds smoothly, and to form words which have not the "jumping and jerking" movement in the centre and which the child at first appears to consider as a necessary part.

Many contrivances may be used to overcome this, for example:

1. Separate the fingers, then have the child try to put the sounds together, as the teacher puts the fingers together.

2. In the same way bring the hands together.

3. Have an ordinary pencil-box which has a sliding cover, and encourage the little ones to *slide* the sounds, as you *slide* the cover on. This will be found to be an excellent plan. The children seem to grasp the idea eagerly.

IV. *Analysis of words into three sounds*: The stage has now been reached, where the pupils are familiar with oral phonics, and where the separation of words into more sounds may safely be undertaken. We feel that time has been saved by not undertaking this sooner.

Continue this work, and the constant drill on each sound, also the forming of new words from these sounds. This will furnish plenty of material for silent reading and oral expression. Many new combinations of sounds may be formed from the separate sounds which they have learned from key-words. Hence, some useful sounds such as—sp, cr, st, fr, fl, sl, tr, pr, sc, pl, br, also three letters may be combined as—str, spr, etc., but the child will need to be dealt with patiently, for this operation is somewhat complicated to the child-mind.

So far, we have chosen words to the bottom of page 8 in the Primer, but on this basis we have built up quite a large vocabulary, and consequently have really learned many words, which appear on the following pages, leaving a comparatively few *new* words, in each of the following lessons for some distance in the Reader.

The lesson on page 9 may be taught by the Combination Method, partly as suggested in the Manual, but also making use of all former

teaching to develop as many words as possible by phonics; for every effort on the part of the child makes him more independent and more able to learn to read for himself.

1. Have pupils repeat the rhyme orally until you are *sure* that they have the words exactly correct, so that in the work which follows you may be spared from hearing, "*Pussy's* in the well", "Who *pulled* her out", etc.

2. Write on the blackboard two or three lines at a time. While having the pupils repeat this, be sure to have them notice that the pointer is indicating the word as they name it.

Have the new words coloured. Let the children point to them individually, and in case of failure have them start back at the beginning of the rhyme, stopping where the pointer stops, namely at the word which was not recognised in the previous attempt. Keep testing until the pupils are familiar with such new words as: *Who*, *put*, *took*, *her*, Long (Tom) Thin, out, Short John *Stout*, little, this.

Also notice the words *ding* and *dong*, but use the bell to help in the teaching of these for the sake of variety, but more particularly to point out to the children that the final *sound* in each of these words is a very good imitation of the real sound of the bell, so that in their reading they may see the reason for prolonging this final syllable, or rather the last part of the syllable. The word "*bell*" is familiar. Have the pupils notice "*well*" and "*tell*"—also "*Nell*", and tell you how these words differ. Hence obtain the sounds "w", "t", and "N", for further use. Also make lists as complete as their knowledge of phonics will permit: bell, well, Nell, tell, sell, shell, spell, smell, etc.

Such words as *Nell's*, *Tom's*, *Sam's* may be drilled on.

We now have such new sounds as, "*th*, *ook*, oo", from which to build up, book, nook, cook, hook, look, shook, crook.

The lesson on page 10 contains the new words: have, feet, food, come, school, sees, seed.

Teach *have*, *come* and *school* by the Sentence method.

Develop sound "oo" from "food", and "school" from the old word *see*; we readily get *sees*, and *seed*. We may also get *seem* and *seen*.

In this connection the pupils may be taught to take such sounds as "eep" in "sheep", and change the last sound to get "*eet*", "*eer*", "*eef*", "*eel*", and then place sounds in front of these to form new words. This may be used for seatwork. A very interesting exercise may be formed, if the teacher weaves a story as she proceeds with her work, placing on the blackboard in colours the words which she wishes the pupils to find out, and pausing in her story for them to assist her. This keeps up a lively interest.

V. But we have now reached the point where the Primer introduces printed forms, and hence our next step is from the Script to Print.

This should present very little difficulty if the pupils are allowed to see the two forms side by side. Show the children that in many cases, if the printed letters were but joined together, they would form something very similar to the Script. The uses of the Script and Print should be explained, and the children assured that they *say* and *mean* exactly the same.

Take the words as a whole first, and give the children a great deal of practice in finding the corresponding form—that is, have each word written and printed in one or more places, then point to one form while the child goes on a hunting expedition for the other.

The children may be given slips of paper for seatwork. On these slips words may be written or printed. Have them arrange them in rows after the words have been matched.

After a short time the individual letters may be picked out, using the *name*, not the *sound* of each.

Use both Script and Printed form for a few lessons from the blackboard, also introduce the Primer which may not have been used up to this time. Teachers differ greatly as to the best time to introduce it.

Later on the child may be given very practical tests of his knowledge of Print by being asked to change the lessons in the Primer back to Script. By careful supervision the difficulties of the individual will soon be overcome.

By degrees they have learned the names of the letters which may now be given in order. Without any special effort, if the letters in their different forms are kept on the blackboard and the pupils allowed to copy, they will in a short time become proficient.

More of the teacher's time may be now devoted to expression after the child has been taught to read silently and to gather thoughts with the aid of the teacher's questions which have helped him to enter into the spirit of the selection. Each lesson should be made as real as possible by means of dramatisation, dialogue or pantomime.

Impress upon the child that reading is only *talking*.

If the Phonic lists have been built up daily, we shall find very few really new words on any one page of the lessons which follow.

We meet such words as "*How*" with the new sound "ow" from which to form our list, "*where*" introduces the sound "*wh*", "dress" makes it necessary to speak about the letters which are sometimes doubled at the end. In this case the sound is unchanged.

"Farm" contains the useful sound "*ar*", "what" must be dealt with carefully because of the sound of "a". It had better remain unanalysed.

"Dish" gives us the sound "ish" for building.

"Are" calls for a comment on the final "e", and a little later we must deal with the final "e" in the long list of such words as *cake, Dane, hole, rose, white, pure, brave,* etc.

It is wonderful how very easily the children grasp the significance, and how interested they are in telling you that it is a great *helper*, always assisting some other letter, thus enabling it to be more useful, while the little helper is so modest that it has never been known to say a word about it.

This outline of the first few pages of the Primer has been a suggestion of the plan which may be continued throughout the book. The farther we go the more interesting it becomes, for the children become intensely interested in finding out words for themselves. They are not content with the words in the Reader, but are delighted to have the privilege of reading fresh stories from the blackboard, and manifest great joy upon finding that they can actually read a new story from a new book.

Suggestions for the Class-room

Teacher and Parents.—The stronger the teacher's hold on the community the easier his school work. A father or a mother in five minutes' opposition to the plan of a teacher can tear down more than the teacher can build up in a week. If the teacher has the hearty support of the parents, it is an easy matter to secure the co-operation and approval of the children. Without the support of the parents he is almost powerless, so far as lasting good is concerned, with the children.—F. E. Sanders in *Arkansas School Journal.*

The Good Teacher.—I have noticed: That the good teacher is not given to "much speaking" in her class-room. That she does not detain the whole class because of her lack of ability in detecting evil-doers. That she dismisses *on time* those who have done their day's work. That she sees that they go out in an orderly way. That she marks or passes judgment upon all work that she requires her pupils to do. That she gives a pupil a fair chance to explain his side before she passes judgment, even when the case seems to have but one side. That her pupils have faith in her promises and believe that she is their friend. That she takes several educational journals and can discuss intelligently new methods of teaching and discipline. That she is loyal to her school and inculcates loyalty in her pupils. That because of the planks in her platform she sends from 90 to 100 per cent. of her pupils to the next higher grade.—*Selected.*

Primary Reading Lesson by the Phonic Method

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The Lesson to be Taught.

The combination "ay" and its complement "ai" are to be presented to the class, and the proper position of each in words clearly defined.

Aim of the Lesson.

1st. To fix in the child's memory, by many examples, the place that "ay" and "ai" hold in words so that the proper use of these combinations may become automatic.

2nd. To expand the child's vocabulary.

The class has reached the stage where the sounds of all the single consonants (except *x*, *y* and *z*), the long and short sounds of the vowels, and a few of the combinations, ee, ar, sh, oo, ch, cr, and th, have been mastered. Analysis and Synthesis have become well-known processes. Short sentences have been freely used when each new letter has been presented.

Bring before the blackboard the senior portion of the class provided with slates, or pads, and pencils.

I. Steps preparatory to Teaching of the Lesson.

(*a*) Review of known sounds may be taken after this form. Before the assembling of the class the teacher has placed near the top of the blackboard, in script or print, the list of known letters. These letter-children may be arranged on top of a long fence drawn in chalk. At a given signal the curtain, which has been covering them, is withdrawn by one of the children, then the teacher with pointer in hand says: "Now for our game. Lips closed. See who will be first to find the

word." This acts as magic on the class and every eye is fixed on the pointer as the teacher proceeds to spell a word with it, such as s-t-r-ee-t, b-u-m-p, c-a-r-p-e-t, s-p-l-a-s-h, etc. Or, certain little letters might be made to jump down from the fence, thus forming a word.

These eye-gymnastics are wonderfully stimulating to alertness which is sustained all through the game.

Self-restraint is also strengthened in not allowing the answer to pass the closed lips until it is asked for.

Again, the known letters might be printed on the steps of a long ladder, or as notes on the keyboard of a piano, or on birds in a tree. Variety gives an added zest to work. The *game* idea secures co-operation at once.

(*b*) Let the children in turn become partners in the work, and with pointer in hand spell out some word suggested by the teacher (ear-problem), or point to the letters of some word of their own choosing, after having first whispered it to the teacher, that she may see if all the letters involved in the word are present on the blackboard.

It is a delightful thing to a child to see that his schoolmates are able to find his word. It inspires confidence in his own powers.

If possible allow these letters to remain on the blackboard after the lesson is over, for they become valuable for seatwork in word-building or drawing.

(*c*) A variation on curtain work is secured by the teacher writing a word on the blackboard. After it is recognised by the class, the substitution of a different vowel or a change in the first or last consonant secures many new word-forms. Then the plan is reversed, and the children erase or substitute a letter as the teacher names the word, thus making them co-workers.

II. Preparatory to the presentation of new form, a short review on the long sound of the vowel "a" should be taken.

Give a short drill on words involving long "a". Pupils discover by means of teacher's questioning that there is always one consonant (or two) following the long sound of the vowel, and before final "e". (The terms vowel and consonant through frequent use by the teacher have become well-known words.)

III. Children discover the need of a new symbol to express a familiar sound.

Class is required to write a word such as "clay". Some in haste will write "clae". Others will recognise at once that there is no consonant sound after the long sound of the vowel, and will look appealingly at the teacher to know what to do. She will at once present the correct form "clay".

There is nothing new to be learned about the form of this combination "ay", as each of its letters has been studied in former lessons, nor about the sound, which is the same as long "a", so the class may proceed at once to write it on slates or pads.

IV. Practice in the use of the new form.

A column of words involving the new combination is soon formed on the blackboard, and the class see that where there is no consonant, or no consonants, following the long sound of the vowel "a", "y" is used to complete the form, and that the position of the new form "ay" is at the end of words: May, bay, say, pay, gay, stay, gray, clay, tray, away, dray, spray.

Give many ear-problems involving this new combination as that is the only way to make its use automatic.

V. Presentation of companion form "ai" (as "ay" and "ai" are always taught in the same lesson).

Pupils are required to write a word such as "stain". The little fingers will record at once "*stane*" for didn't they hear the long sound of "a" and a consonant sound after it? When slates are raised for the mark, the teacher must then explain to the class that there are certain words they will meet with, that are formed from this list (pointing to the list with "ay" in it) by changing the "ay" into another form "ai" before adding one or more consonants, as, for instance, the word "stain" which is formed from "stay" by changing the "ay" into "ai" before adding "n". The teacher places this word on the blackboard, then class make correct form on slates. She then proceeds to form a new list of words derived from the previous one as follows: stay, stain; may, maid; bay, bait; say, sail; pay, paid; gay, gain; gray, grain; clay, claim; tray, trail; away, await; dray, drain; spray, sprain.

By colouring "ay" and "ai" in each list the children see plainly that "ay" at the end of words becomes "ai" in the middle of words.

Ear-problems to emphasise this rule are now given to test whether the class has grasped well the principle involved.

VI. Sentences containing the new combinations follow.

Let these be short, and written or printed on the blackboard.

(*a*) Let them contain only the "ay" principle as:

1. May has the tray.
2. Ray went to the bay.
3. I may stay and play, etc.

(*b*) Those involving the "ai" principle.

1. The bait is in that pail.
2. Let us wait for the train.
3. That pail fell into the drain, etc.

(*c*) Sentences containing words from both lists.

1. This paint is gray.
2. He is afraid to stay away.
3. Ray will sail on the bay to-day, etc.

A good plan is to have the class turn backs to the blackboard as the teacher writes each sentence. At the word "Front!" class turn, and raise hands when the answer is ready.

The moral side of the child's character is also strengthened by this plan, as one who "peeps" is looked upon with contempt by his classmates.

These sentences may also be given as ear-problems.

VII. Attention to Expressive Reading.

No matter how short the lesson may be, let some attention be given to expressive reading. By questioning the right emphasis will always be secured. Have individuals, as well as class, give the response. The teacher also reads the sentence emphasising some word in it, and one member of the class is allowed the privilege of marking with coloured chalk the emphatic word, or erasing all but that word. As this is considered great fun, each will be anxious to have the honour of doing it.

VIII. Commands may be written on the blackboard, partly illustrated, as:

1. Put the clay on the (*drawing of chair*) Olive.
2. Stand the tray on the (*drawing of table*) Ray.

The child selected does the action by writing the word "clay" on the "chair", or "tray" on the "table". If the child does not recognise his or her name quickly, then substitute another name.

At the conclusion of the lesson the bright pupils may be sent to seats on "test" sentences. For this, use sentences already on the blackboard. With pointer, tap one and another word in these, thus forming a different sentence each time. Many sentences may be formed in this way, if sufficient material has been left on the blackboard. Vary this by the introduction of new sentences containing only known sounds. The backward pupils are left standing on the floor, and now receive more individual instruction, gaining their seats on the finding of separate words.

Note—The peculiar words "says" and "said" need not be taken up in this lesson, but may be placed on a chart in the list of peculiar words gathered from different lessons. These *peculiar* words are those in which the sounds of the vowel or combination is slightly different from that ordinarily given.

Little Journeys to Rural Schools

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V.

IT was Thursday afternoon, one hour before the time of dismissal, when I arrived at the Trenton school. The first feature that attracted my attention was the clean and attractive appearance of the spacious yard; and those qualities were even more apparent within the building. Many a teacher's failure in a rural school is due to the depressing influence of both interior and exterior surroundings, which surroundings would defy the power of the most skilful pen to properly portray. They represent barbarism rather than civilisation; and it is nothing short of a *crime* to ask a respectable lady and a group of innocent children to spend 5 hours of the day in some of the so-called "school-houses" that may still be found in various parts of this great country, whose wonderful progress and prosperity have been so frequently and so loudly acclaimed. The teacher should make every possible effort for improvement; and if such efforts are unavailing, she should seek the very first opportunity of changing her position for one where more

refined influences prevail. The government should issue a descriptive catalogue of all the schools in the province, and a copy of this catalogue should be in the hands of every teacher.

The teacher and pupils of the Trenton school reflected the cheerful spirit of their surroundings.

Miss Emerson explained that the youngest pupils had just been dismissed, and that "Memory Work" was the next lesson, carried on simultaneously in all the classes.

"Our object is to learn as many lines as possible in the 45 minutes assigned to that work."

"But is not 45 minutes a long period for one subject?" I asked.

"We do not find it so with Memory Work. In fact, at the children's request the time is sometimes extended to an hour."

The children were all studying quietly.

"And how do *you* occupy the time during their study period?"

"Well, you see I have a book of poems: I learn as many lines as I can during the period."

"Do you recite your lines aloud?"

"Yes, the children understand that I am a *student* with them; and that knowledge increases their interest."

For memory work, the school was divided into two classes. The senior class was learning "The Lady of the Lake"; the junior class made a choice from the selections in Stevenson's "Child's Garden of Verses". Each pupil was allowed to learn the selection preferred.

"There is no rivalry among the pupils in this lesson; but each pupil is trying to learn to-day more lines than he learned yesterday."

"Do you have the verses analysed and the words parsed?"

That question actually brought a look of pain to the teacher's face.

"No, indeed! That was done when I was a child; and every pupil in the school detested anything named *poetry*!"

"Then you explain nothing whatever?"

"Only when a pupil asks for the meaning of a word or a peculiar expression. Sometimes I ask them the meaning of certain lines; if they cannot give the explanation, I drop the matter. Some pupil will likely ask the same question before the lesson ends. I have found it far better to arouse curiosity than to take extra pains to satisfy a curiosity that is not yet ripe."

When the time arrived for recitation, each pupil, as called upon, told the number of lines learned; but that number was not always recited. It was quite evident that previous lessons had been accompanied by the most thorough drilling in the proper methods of reciting poetry; for the children recited as they would talk—there was no "sing-song". They listened eagerly to one another, and even more eagerly when the teacher

recited her selection, and made a hasty drawing on the board to illustrate its meaning.

I wonder if many teachers try the plan of making explanations with drawing rather than with words. Try it, and observe the increased interest on the part of the pupils.

"Now, we all learn one verse together in this way," said the teacher, as she drew the curtain aside and revealed one verse neatly written on the board.

The children studied the verse carefully, raising hands when they were ready to recite. When five hands were raised, the teacher arranged the curtain so that it covered all but the first two words of each line:

The curfew—
The lowing—
The plowman—
And leaves—

After four children had recited the verse, aided by the words in sight, the entire verse was hidden, and it was then recited by a few others.

Many teachers make memory work a drudgery for themselves and the pupils. One reason is that they continue to drill on one selection until *all* the pupils have that selection prepared. Some pupils can commit very short selections; while others can learn a large number of lines in the same time. The teacher should plan the lesson in such a way that each pupil can advance as rapidly as possible. There is too much "average" progress made in educational work. In this subject, at least, let us break away from the average pace and give every pupil a free rein.

At the close of the memory lesson, ten pupils were sent to the board, and asked to write any four lines of any selection they chose. This work was not corrected; but the teacher wrote "CORRECT" under the verses that contained no mistake in spelling, capitals or punctuation.

Teachers, as a general rule, spend too much time in looking for *mistakes*. Let us make an occasional change, and for one entire day not mention mistakes at all; but advertise judiciously all the *correct* work that comes under our inspection. That will be more pleasant, and will not be such a serious tax on our patience and our time. That day will be such a delightful one, we shall wonder that we never thought of the plan before; and thereafter such days will be of frequent occurrence.

On leaving the Trenton school I commented to myself, "What fascinating work teaching may be when the proper mental attitude prevails among teachers and pupils!" To develop and maintain such an attitude is one of the teacher's most important functions.

The Use of Cylindrical Blocks to Illustrate the "Steps" of a Lesson on Number

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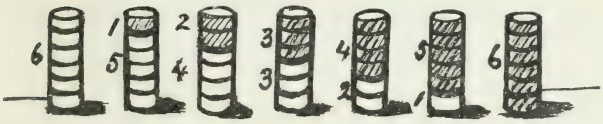
LESSON IN THE ADDITION FOR FACTS OF "SIX"

I. **Preparation**—(1) Count these—a group of 6 one-inch blocks.
(2) Find the height of this block—a six-inch block.
(3) Find another as high—selecting from the set.
(4) Set down in figures the heights of these–blocks 2 in., 4 in., 3 in., 5 in., 6 in. shown in succession.
(5) The teacher sets up the blocks in columns thus



calls them "towers" and asks the children each to count by the rings the height of one. A ruler might be put over the top to touch all the towers.

II. **Aim**—To find what two lengths we may use to build these towers.

III. **Presentation**—How high is each tower? "6 in." How do you know? "I counted the rings."

(Here the whole is seen, *definite* as a whole but *vague* as to its component parts.)

(1) One pupil breaks down a tower into 2 parts, a one-inch part of one colour and a five-inch part of another colour. Others in turn break down the towers into parts whose lengths are—2 in. and 4 in.; 3 in. and 3 in.; 4 in. and 2 in.; 5 in. and 1 in.

(This is *analysis*.)

(2) Each now builds a tower and says what makes the tower (*a*) in words, (*b*) in figures one above the other.

as (*a*) { "One and five make six" / "Two and four make six" / etc., etc. } (*b*) { 1 2 3 / 5 4 3 / – – – / 6, 6, 6 } etc.

(This is *synthesis*.)

(3) Look at one tower (this one "three and three"). Now face about, shut eyes and say what two numbers make 6.

Face front, look at two towers (these two, one and five and five and one). Face about, shut eyes, wait a moment and tell in two ways what numbers make 6, etc., etc.

(This aids in securing mental images.)

(4) Repeat this exercise but instead of receiving the answers in words let them be written on the blackboard in figures one above the other with the sum written below.

(This gives the abstract form in which the ideas are usually expressed.)

IV. **Application.**

(1) The set of blocks are placed on a table some distance away. Each pupil is timed as he runs and selects two lengths which make up a six-inch tower and builds his tower.

(2) Cards with numbers on them may be used instead of the blocks. The numbers on the cards must add to make six.

(3) Each is given so much time. In this time he is to build the towers in as many ways as possible and set down his findings in figures corresponding.

(4) Each tells while facing away from the board all the pairs of numbers which make "six".

(These exercises give children something to *do* and through *expression* and *use* of ideas *impress* them.)

. . . . . .

In a similar way these blocks may be used in lessons on

(1) Counting—(a very fundamental exercise).

(2) The number facts (1-10).

(3) Combinations in addition such as 8+7; 18+7; 28+7 . . . ; etc.

(4) Notation.

(5) Subtraction by either of the methods—(*a*) equal additions or (*b*) decomposition, etc., etc.

Teacher—What is a vacuum?

Boy—I know, teacher. I have it in my head, but I can't just think of it.—*Brooklyn Life.*

Teacher—Who'll tell me what is meant by the floating population?

Kid—People who live in houseboats.—*Kansas City Star.*

Teacher—What is the derivation of the word lunatic?

Pupil—Luna, the moon, and—er—er—attic, the upper story.—*Town Topics.*

Teacher—Can you tell me why the trees leave in spring?

Willie—Don't know, teacher, 'less it's because dey hears de birch bark.

Meaning of Experimental Education

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WITHIN the last four or five years the development of the Science of Education has undergone a remarkable change, which has not yet been sufficiently understood or appreciated by the teaching profession, as the results have not yet been incorporated in text-books used in Normal Schools and Training Colleges. This change has only recently been made in the educationist's attitude to educational problems and as the result, several chapters in well-known books have become hopelessly obsolete. There is no longer any need to apologise for the Science of Education or to argue its existence, for it is no longer a series of empty discussions, based on *a priori* assumptions, and coloured by class, religious, or political prejudices. By the application of scientific method to its problems, the Science of Education has become truly a science, and has been for several years a special section of the British Association, which indeed in 1910 published a list of suitable subjects for immediate pedagogical research.

Looking back on the history of Education, we get the impression that scientific pedagogy has had a miserable past. The great educational reformers, with the exception of Quintilian and Pestalozzi, were not really teachers in any true sense of the term. They were renowned philosophers, scientists, or pure *dilettanti* like Rousseau, and very often confined themselves either to a mere essay, as in the case of Milton, or to a theoretical denunciation of the conditions prevalent in their own times, as Spencer did. In no case did they deal with the actual conditions of teaching children of school age under school conditions.

To this day, however, the general public will eagerly listen to eminent men in other spheres of life, when they condescend to give their views on education. And if Lord Roberts delivered a speech or wrote an article on the subject, his remarks would be quoted everywhere and would form the basis of a wearisome controversy on both sides of the Atlantic. Education shares with Theology the unenviable distinction of being a subject wherein the amateur or layman considers himself more expert than the specialist.

Experimental Education is scientific research applied within the sphere of general pedagogical and didactic problems by means of experiment and exact investigation. The method has been but a short time in actual operation and the results so far have been too wide and too few to

make the systematic presentation of the whole field of Pedagogy immediately possible. Indeed an attempt to write a permanently exhaustive treatise is still premature, as there are great gaps to be filled up and these gaps must not be filled up by temporary borrowings from other allied spheres of knowledge, or by guesses and accepted beliefs. But the researches are already sufficiently advanced to make systematic Pedagogy a possibility in the near future.

Experimental Pedagogy is inductive first and deductive afterwards. It aims at exact quantitative determination of the various processes and methods of Education. This is in direct opposition to the systematic deductive methods of Herbart, who first decided that the aim of Education was summed up in the one concept—morality—and then proceeded to deduce from the rational Psychology and Ethics of his own day a complete system of teaching methods, culminating in the development of the famous five formal steps, whose worse fault was that they were too formal. But a deadly blow to any such *a priori* and deductive treatment must always be dealt by the progress of knowledge in both Psychology and Ethics; so that Herbart's work, delightfully Euclidean in its sequence, possessed an inherent weakness, which was bound to be fatal to it in the course of time. Had Herbart's principles prevailed, pedagogy would have been condemned to everlasting stagnation.

Rousseau and Herbart were swayed by the greatest illusions about the real conditions of the child's mental and bodily life. Rousseau had merely an imaginative insight, and when he reaches the truth it is more by luck than good guidance. Froebel undertook to base his kindergarten instruction on mathematical speculation and speculative views on the education of man in general. Pestalozzi advanced beyond the mere pedagogy of ideas, authoritative statements, and vague proposals, and tried to base his pedagogy on a home-made brand of the psychology of mental powers, while at the same time he recognised the need for a deeper scientific basis for his method. Indeed his whole life-work was a constant search for the best methods of instruction resting on the fact that our knowledge is derived from observation. The contributions of Pestalozzi and Froebel are, however, important and permanent steps in advance, precisely because they were drawn more from the actual life of the child and the practice of instruction.

In its relation to society, Education must rest on the social science of the age, for the aim of Education must always be ethical and social in the broad sense which includes the narrower political meaning. It is true, also, that many results in other subjects which relate to the subject of education can be utilised for our purposes, but it must be remembered that these results have to be re-interpreted and viewed from a new standpoint. However, Education is not a mere application of these sciences.

Physics is not applied Mathematics, neither is Biology applied Chemistry and Physics. Further the Psychology that we have been accustomed to is adult Psychology, whose selected tit-bits have been considered a sufficient meal for the teacher in training. The only Psychology that can be applicable to our purposes is the Psychology of the child of school age—not of the infant, and certainly not of the adult. But just as the science of Navigation uses as much of Astronomy and Mathematics as comes within its own scope, and just as Geography can draw on the results of many other sciences such as Geology for its material, so the Science of Education may likewise utilise material gathered elsewhere and yet remain an independent science. For the results are regarded from a new point of view—that of Education, and are altered thereby and interpreted differently.

For instance, the question of overpressure and brain fag has often been investigated by doctors and psychologists whose interest however was chiefly medical or psychological. The results of these researches are also of decided pedagogical interest and can be utilised, provided they are considered from an educational standpoint. Thus, for example, the increasing number of reports made by hundreds of school doctors all over the world are certain to add very considerably to our knowledge of the physical life and social conditions of school children.

The older Pedagogy has hitherto been partly an ideal and partly a normative science; it tried to develop ideals of Education and rules or precepts for the practice of instruction; it was always a guide and could be nothing more than a guide for the teacher. But while there is nothing to say against the assertion of rules in itself, yet in order to reach a scientific basis for our precepts, we must first of all conclude a fundamental investigation into real conditions, before we can make the precepts authoritative. Otherwise they are merely optional and have little or no content. At best they are the result of the more or less practical experience of individual teachers, without a guarantee that they are really warranted. For instance, in order to discover precepts for teaching a child to read, we must first *analyse* reading into its different parts, and investigate each of these separately. "We find that every act of reading is based on a purely optical process—the perception of the word picture; on a purely inner process of comprehension—the gaining of the word meaning; and on a speech process—the phonetic interpretation of the optical picture and the right phonetic expression of it." (Meumann, Vol. 1, p. 27.) This exhausts the work of analytic experiment. Synthetic experiment shows how these three processes work together in reading, and for Pedagogy this latter type of experiment is more important, e.g., for teaching how to read. Afterwards we can investigate purely in practice how the gain in ability to read progresses in the child, through

what stages it runs, what its natural conditions are, and how these are related to the stage of mental development of the child. Or after the separate parts have given a clue to a method or methods for teaching the whole process, we can try these out in actual practice with groups of equally graded children and test the results quantitatively. Thus Experimental Pedagogy has both analytical and synthetic aspects. In the former the various processes of the school room are analysed into their elements and each factor is investigated separately; the synthetic treatment then recombines the factors and gives conclusions as to the processes employed by the teacher in his daily work.

The advantages of this exact research over occasional and irregular observation are too evident to require great elaboration. The first is, of course, that the investigation of facts is systematic; secondly, the experiments can be repeated under similar conditions and checked; thirdly, one investigator can be controlled by others, and individual peculiarities and advantages can thus be eliminated; fourthly, combined work or collaboration is possible and investigators can build on each other's results; lastly, and this is most important, the matter of local conditions or national needs can be attended to. For if there is one objection that one can make to all foreign systems and ideas it is just precisely this—that they suit peculiar conditions and very probably could not be transplanted with the same results. An exceedingly good example of this is to be seen in the "Montessori" system. What has been accomplished in Italian slums with infants whose mother tongue is one of the most phonetic languages on earth, whose teaching has been based on the methods adopted for defectives, may be startling enough when considered beside the Italian school system. But to infer from this that identical methods can be used with equal success in Canada where the conditions are so different, is the height of absurdity.

The *method* of the new science has been borrowed from Experimental Psychology, and apart from the development of that subject the new Experimental Pedagogy would have been impossible. The *material* to which the method is applied is, however, pedagogical material and problems—the life and work of the child, individual children and children in groups, and, above all, children of school age, and not infants up to the age of 3 or 5 with whom Child Study has too often dealt.

Experimental Pedagogy, like Experimental Psychology, began in Germany and thence has spread to other European countries, to America, and to Asia. Even Argentina and Chili in South America, and Japan in Asia have their pedagogical laboratories. It is still in the pioneer stage and the great originator of the movement is Dr. E. Meumann whose two volumes of lectures appeared in 1907 and are now being enlarged and

issued in 3 volumes. His works will long remain a veritable mine in which future writers will dig for their materials.*

The chief value of the research method for the teacher lies in the fact that he will be able to satisfy himself every time about the basis of his pedagogical procedure. It will make him independent of mere general precepts and give him a sense of scientific craftsmanship and increased interest in his work. He will no longer be slavishly dependent on such general platitudes as "many-sided interest" and old-fashioned maxims of method, which crushed all the mental independence and gave no opportunity to real talent to unfold itself freely.

On the other hand, the teacher cannot be encouraged or expected to take part in these researches, as he is appointed to teach and not to experiment. It is not his duty to make contributions to this new science but merely to know its results and apply them. For it is one thing to utilise the results and quite another thing to add to them.

Book Reviews

Rural Arithmetic, by Professor J. E. Calfee, Berea Normal College, Berea, Kentucky. 119 pages. Price 30 cents. Ginn & Company, Boston. There is no doubt that much of the Applied Arithmetic which is taught in our public schools is not the kind which is interesting to pupils in rural schools. This little book is intended to fill this want. All the exercises are taken from everyday farm life and are real and practical. Outside of the arithmetic proper there is much information which can be put to practical use in increasing the profits on the farm. The book contains a minimum of theory and a maximum of practical work. A partial list of the subjects treated is Rapid Addition, Decimals, Interest, Lumber Measure, Land Measure, Milk Problems, Feed Problems, Dairy Problems, Cost of Growing Crops, Educated Labour, Health and Sanitation, Fertilisers, etc. Teachers in rural schools would find much in this book which would give life and reality to the subject of arithmetic. J. T. C.

Carlyle's Heroes, Hero-Worship, and the Heroic in History, edited by Herbert S. Murch. Cloth, 358 pages. 75 cents. D. C. Heath & Co. Boston. The large, clear print of this edition commends it to the reader at once. Forty-five pages are used in giving an excellent biography of Carlyle with an appreciative discussion of his literary style. The plan and the teachings of the work are dealt with in a manner which helps to clear the approaches for the student. Very useful notes are appended.

*See also Rusk: *Introduction to Experimental Education*, 1912.

School Decoration

ADA WHITTON TILLINGHAST

IT has been beautifully ordained that the human race may express its thoughts and emotions in different ways. It would be a dull world if every one wrote books, or composed music, or talked with no one to listen. Diversity of gifts makes the palpitating interest in life.

The arts of painting, sculpture and architecture are an old language. Their beginnings lie deeply imbedded in the mysterious past when primitive man began to think in the tentative manner of the little child of to-day. One of the first efforts at expressing thought by these far-off ancestors of the great human family was the cutting of outlines of figures on the rock walls of their cave dwellings and colouring them. Many of these crude drawings have been found and they are akin to the well-known early attempts of the modern child.

Thousands of years have passed and to-day we are heirs of the accumulated beauty of the art of all nations.

Many Boards of Education still consider the desire for works of art in schools a fad which will shortly pass into the limbo of things forgotten because ineffective. For years schoolrooms have been made depressing by the presence of inferior half-tones, usually portraits. These portraits have been inadequate in size and without appeal to the children whom we wish to interest. We have been created to love beauty. Our environment is a world full of colour, and we were meant to love it. There is reason for fostering this racial, inborn feeling and using it in an all-round development. We find that artists have expressed themselves on an infinite variety of subjects which arouse thought and appreciation. Oftentimes a picture will express almost instantaneously that which a page of print would be needed to unfold.

There are many halting footsteps in the march of progress, yet all along the way are encouraging indications that schoolroom decoration is coming into its own. Like text-books and other educational material, the pictures are chosen according to the capacity of the child to understand. In the past we have often seen the ruins of the Parthenon on the wall of a primary schoolroom. We venture to say that no teacher could be found at the present time who would make such a selection. The present day teacher does not cater to himself, but asks himself, when selecting a picture, will the children understand this? Will they enjoy it? Will it be an added factor in their mental equipment? In the past it has been almost impossible to obtain desirable art for schools, how-

ever much a teacher might appreciate the need of it. To-day a great and beautiful field has been opened up by photographic reproductions and by good colour pictures in sizes commensurate with the spaces of schoolroom walls, pictures which may be seen distinctly by the pupils. Teachers find themselves able to choose subjects allied to their teaching or to choose them for their beauty as they hang above the working part of the schoolroom in spaces to which the eyes may be raised now and then for messages of pure delight.

How We Decorated Our School

CORA L. FISHER
Public School, Paisley

THIS subject appeals strongly to me, as I think a great deal of the influence of school-life depends upon the schoolroom decorations. And such a dingy, dirty—yes, positively dirty schoolroom as we had! The only redeeming feature it had was decent blinds, green in colour. We stood it for four months, had to, but made up our minds we would stand it no longer. How could we better the existing conditions? A concert seemed the natural solution. So, finally, we decided to give "Hiawatha" dramatised. It proved a success and we had $35 to begin our work of making the room pleasant.

First and foremost the walls must be tinted. We decided on a soft shade of green with buff ceiling. Next came a moulding. What a difference that made! It spaced the walls to a size that could be decorated. Next for our pictures. We found we had $6 left. So we decided on three pictures, two pieces of scenery, a marine and a landscape; and that world-renowned one of Shenck's "Lost". (By the way, these pictures have been utilised several times as composition lessons.) A couple of pupils donated a picture each, and I sent to the Perry Pictures Co. and got 25 of their one-cent size—15 poets and 10 musicians. These I had framed, in plain brown frames, in groups of 5, thus making five pictures. The three containing the poets I hung together—the two of musicians likewise.

The next year the whole school gave a concert and with our share (not as large this time) we invested in four busts. They were chosen by the children and were Beethoven (I had hung a picture of "Beethoven's Moonlight Sonata"), Columbus, Shakespeare (we had "The Merchant of Venice" for supplementary reading) and Longfellow—you see

"Hiawatha" had left its impression. We tried to get one of Egerton Ryerson, but couldn't at that time. The pupils contributed the brackets upon which to place them and the crepe tissue-paper with which to drape them.

Thus I have one corner reserved for the work of the pupils. (Oh horrors! do you call *that* decoration?) Well, *they* do; and I really believe in the majority of cases I do. I have a strip of dark green stiff material tacked on the wall to a height of 12 inches. On this I paste the paintings that I consider worthy. And when you get an array of Virginia creeper, bitter-sweet, rose lips, feathers, Jap lanterns, etc., it is a decoration. I also have a post card rack and in it I place the best of their Thanksgiving, Xmas, Easter and St. Patrick post cards. *That* is a source of great satisfaction to them. Then on the walls I hang any work that they do, not necessarily lessons, that I consider worthy of being hung.

And lastly come the efforts of the teacher. Any Public School grade enjoys a calendar; an Honour Roll is a source of enjoyment, even if their name *isn't* on it, and nine cases out of ten a border improves any board.

Suggestions for the Class-room

A "Wake-up" Drill.—When pupils come to me in the fall, I find them not only slow in mental processes, but equally slow in movements of the body, especially in standing promptly when called upon. I have overcome this habit to an extent that has given me great satisfaction, just by having a simple drill exercise preceding the recitation period several times a day. Taking my name cards, I read the names of the pupils, one by one, each child understanding that he must rise instantly when his name is called, and remain standing until he hears the next name. The names are never read twice in the same order. Sleepiness of mind and body is readily overcome by this lively drill, which is the best possible preparation for the other sort of drill where answers to questions are required.—*L. E., Normal Instructor.*

Needs of Childhood.—"The schools were made for the children, not the children for the schools." Hence it follows that no school system is so sacred, no method of teaching so venerable, no text-book so infallible, no machinery of administration so permanent that it must not give way before the educational needs of childhood.

"It is not work that kills men; it is worry. Work is healthful; you can hardly put more on a man than he can bear. It is not the revolution that destroys the machinery, but the friction."—*Beecher.*

Canadian Artists Series

I.

"I love to depict the pageant of Canada."
G. A. Reid.

GEORGE AGNEW REID, R.C.A., Principal of the Ontario College of Art, painter of Canadian life and character, was born at Wingham, Ontario, in 1860. Early in life he heard and obeyed the call of Art. As opportunity was afforded he studied at the Art Schools and Academies of Toronto, Philadelphia and Paris. As traveller-painter in France, Spain, Italy and Britain he widened his vision and perfected his skill.

"The Coming of the White Man"
By G. A. Reid, R.C.A.

Returning to his native land he set to work with characteristic energy to preserve with his brush the passing scenes of pioneer life. No one has done this with a more sympathetic appreciation. Born in a pioneer home he became acquainted with the struggles and triumphs of that sturdy race which has almost disappeared. His brush depicts the wholesome seriousness of their lives. What tense pathos appears in "Mort-

gaging the Homestead"! What grim tragedy in "Foreclosing the Mortgage"! These scenes, so common a generation ago, have happily almost disappeared from our national life. Now and then a ripple of humour spreads over his canvas. Through a mist of tears, one smiles at the talking kiddies kneeling at the window seat in "Family Prayer". Other idylls of home life are "The Lullaby" and "A Modern Madonna". The work and enjoyments of farm life receive recognition in such paintings as "The Last Load", "Logging", "The Call to Dinner", "The Berry Pickers". What farm boy does not study with smiling comprehension "Forbidden Fruit", and "The Story in a Hay-loft"?

Of late years the art of Mr. Reid has been changing. The realistic productions of his earlier years have given place to idealistic and decorative art. His "Evening Star" has been well described as "a nocturne that tells little but carries the impress of a mood". Mr. Reid's mural decorations and historical paintings are likely to bring him more lasting fame. Examples of his skill as a mural painter may be seen in the main corridor of the Toronto City Hall and in the Library of Queen's College, Kingston. In the former building his large panels, illustrative of pioneer life, rank him among the masters of pictorial decoration. His more recent historical paintings are "The Arrival of Champlain at Quebec, 1608", owned by the Dominion Government, and "The Coming of the White Man", a decorative composition which, by courtesy of the artist, we are allowed to reproduce as the frontispiece of this number.

The limits of our space forbid an enumeration of the honourable positions he has held in the many societies of art with which he has been connected. His fertile genius, untiring energy and kindly nature have ever won the esteem of his associates.

S. W. P.

A raconteur once told the story of how a certain noted lecturer was advertised to lecture on "Keats". Seeing the notice a man said to his companion, "I say, here's Mr. —— going to lecture on Keats; what are Keats?" The audience to whom the story was told laughed uproariously. But there was an amusing sequel. One of the audience said to a companion in the privacy of his room, "Say, old chap, I laughed as heartily as anybody else over that 'Keats' story, but for the life of me can't see the joke; strictly *entre nous* now, what are Keats?"

Teacher—Do you know that the human body contains sulphur in varying quantities?

Johnny—Well that accounts for some girls making better matches than others.

The Woodpeckers

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EVERY schoolboy knows a woodpecker when he sees it, and some of them can be seen at all seasons of the year. When we add to this the fact that he is just as much at home pecking out his living on the trunk of the tree in the rural schoolyard as on the maples and birches of the town or city parks, the evidence accumulates that such a cosmopolitan Canadian as that is a fit subject to become the topic of a nature-study lesson by every enterprising teacher in the country. I am inclined to think that the present is a good season to begin. "The fall of the leaves" and "the preparation for winter" have spun out pretty well but they have become exhausted; months ago the cat and the dog have been the subjects of much counting, mauling and a good deal of inane and insipid talk, but by January they can hardly be made to do duty any longer. It's too early for germination; bird calendars can't be begun, because the call of the north has not yet begun to stir that mysterious, instinctive feeling in the blood that later will drive them up from their winter home in the tropics or beyond. No leaves intercept a clear view of the tree trunks, and the chickadees and the woodpeckers are plainly seen upon the bark and branches.

The first step toward becoming interested in a person or a bird is to know the name. Now we have four or five woodpeckers that are so common throughout Ontario that the mere tyro can distinguish them by a little study and observation. Only two species are not migrants and they are to be found in our woods and parks at all seasons. The winter is an excellent time for an introduction. Getting acquainted with the birds in spring is too much like a lady's reception where there is such a bewildering array of introductions that both names and faces leave no lasting impression. The birds of spring are so numerous and appear in such rapid succession that they leave the child bewildered and discouraged. If we begin, then, at the present season we are sure to see two of our plainest little woodpeckers in their daily search for food on the tree trunks. If they are a pretty good mixture of black and white with a dash of red on the nape you can decide they are the downey and hairy woodpeckers. These are so nearly identical in colour that only the discriminating eye can detect the outer tail-feathers of the downey as pure white, and those of the hairy as barred with black. However, there is not much difficulty in distinguishing them in size as the downey

is the dwarf amongst our woodpeckers, being only 6 inches long—about equal to a sparrow, while the hairy is as large as a robin. It is quite possible that one may also meet that dandy of the woodpeckers—the red-head. He selects his winter home chiefly by the size of the beech-nut crop. If the harvest has been bountiful he decides that a nut in the hand up north is worth two in the southern bush, and sets to work to collect a good supply in knot-holes and other convenient openings and settles down amongst us to spend the winter. This flashy gentleman cannot be confused with any other bird, let alone a woodpecker. The others—at least the males—all have a touch of red somewhere, but this fellow's whole head-dress right down over the neck to the shoulders is such a brilliant red that it flashes in the sunlight. Whilst amongst the other species only the males show the red tinge, the red-head's wife wears as brilliant a head-dress as her spouse.

Happy the observer so situated in the back, unsettled country who makes the acquaintance of that magnificent woodpecker, the pileated. His flashing colours of red and white, his giant size, make him an object of admiration to all who have had the good fortune to cross his lonely path.

In mentioning the species any account would be incomplete that neglected that most sociable of all his tribe, the flicker. He will not be back for several months, but then makes his presence known not merely by his large size and conspicuous colours but also by his incessant calls, for he is certainly the most noisy of all his noisy tribe. His true splendour appears only during flight. At rest his dull, mottled plumage does not compel attention, but when he flies, the bright white rump flashes forth like a signal and the gorgeous golden yellow of the underwing is unrivalled in its brilliancy by the plumage of any other bird. His Pacific representative has the true go-you-one-better character of the West. Not satisfied with the flashing yellow he has modified the underwing to a brilliant crimson.

The climbing of the woodpecker is a mystery. While other birds have three toes in front and one behind, he, in order the better to grapple the bark, has two in front and two behind, and with the sharp claws he seizes hold with a grip of steel; then with the stiff spines of his tail fitting into every sinuosity of the bark he props himself for action. We can understand with such arrangements how he can steady himself against the trunk while at rest. Newton says that for every action there is an equal and opposite reaction, and when he sits against the bark and drives home a series of rapid sledge-hammer blows of his powerful beak, an equal force tends to drive his body back from the bark; but he sits there composedly, a living contradiction of Newton and his laws of reaction. Just when the scientist has succeeded in elucidating the

magnificent perfection of his foot as an attachment organ with its two toes in front and two behind—a zygodactyl foot, if you please—nature brushes away all his conclusions by sending amongst us for a few weeks in January or February that picarian representative of the north—The Arctic Three-toed Woodpecker. While a scientist can demonstrate to a nicety that the zygodactyl foot is the proper foot for tree climbing, this yellow-crowned visitor from the north can perform all the gymnastic feats of woodpeckerdom on the side of a tree-trunk with a skill and

"In the Winter Woods"

precision equal to that of his southern relations, and yet as his name would indicate the inside toe turns neither forward nor backward but has disappeared altogether.

The nest of the woodpecker is a work of art and skill. He drills a hole in the side of a tree trunk and then turns down a distance of a foot or two. The vertical tube is made bottle-shaped. They tell us that Thales first introduced geometry into Greece, but long before this scholar described circles, the woodpeckers were drilling holes of such true circular form that even the wise Ionian could not surpass them. The smoothness and polish of the walls of their chamber would provoke the

admiration of the cabinet maker. All this art they perform with their wedge-like beak alone, but it must assuredly be directed by a steady eye and a clear brain.

The woodpeckers are largely insectivorous and occupy a field all to themselves. While others catch insects on the wing or pick them from the foliage, the woodpeckers dexterously dig the larvæ from their burrows in the bark and wood. Their tongue which they use for this purpose is truly a wonderful organ. It is a hard, pointed structure with lateral barbs and no arrow can shoot from its bow with greater quickness than this tongue. It pierces the burrows and impales the victims. This is the orthodox method of feeding amongst respectable conservative woodpeckers. Some will catch insects like flycatchers, all will eat fruit or nuts at times. The flicker loves the ants and drives his long slimy tongue down into their hills. The pugnacious insects attack this intruding organ and become entangled in the gluey mass when he pulls it forth covered with the entrapped victims. It is humiliating to have to admit that such a handsome friend as the red-head is guilty of the most degrading practices of all his tribe. This well-dressed aristocrat among the family is known to attack the helpless nestlings of flycatchers and other birds and devour the whole brood without a prick of conscience. The one that has departed farthest from the ordinary method of feeding is the sapsucker. Tapping the maple is an old industry in Canada, but long before Indian or White had ever extracted the sap from its wood this bird had learned the art. He will dig a series of pits into the sapwood, and as these fill will visit them regularly and lick up the watery food. He not merely extracts sap from the maple but also from many other trees. It is even stated that he has learned that most human of arts, the art of becoming intoxicated. He taps the mountain ash and the astringent juice makes him quite unsteady in the air, and he even becomes drowsy, clinging to the tree till he sleeps off his drunken spree. It is easy to see that the woodpeckers play their part in the economy of man. A single pair of the little downeys searching injurious insects from dawn till sunset during a year will go a long way to assist man in his fight against the pests. The sapsucker, while he destroys insects, injures and kills so many trees that he is a doubtful benefactor, and the cannibalistic habits of the red-head set the balance strongly against him. It is doubtful if the timber-trees could successfully withstand the ravages of the boring insects if it were not for the untiring assistance given them by our fascinating little feathered friends—the woodpeckers.

Inspector—Any abnormal children in your class, Miss Pedagog?
School Teacher—Yes; one of them has good manners.

Method of Dealing with a Play of Shakespeare

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THE important thing to be remembered in teaching a play of Shakespeare to a High School class, in the Lower School especially, is that it is to be taught and studied for its own sake. The pupil's attitude towards the play is that of the theatre-goer, who finds in it a picture of life. He is interested in the development of the plot, the appeal to the feelings, and the portrayal of character, rather than in the literary criticism of the play.

The teacher must, then, first of all, attempt to make the play real to the pupils, and in order to succeed in this he must make the play real to himself. Every teacher should, if possible, see a Shakespearean play acted by a good company. The words of the dramatist are only the framework, and the teacher must be able in imagination to take the place of each of the characters, to be carried away by his emotions, and to see how the actor must supplement the bare words of the play by actions, gestures and other expressions of feeling. Unless the teacher and the pupil alike are able to live over again the scenes of the story the play must lose much of its value for the class.

In teaching any play, from this point of view, there are a number of problems of method which present themselves, and we shall consider a few of these in turn.

I. How to Begin the Study of the Play.—Should the teacher talk to the class about Shakespeare, tell them about the history of the play, or about the town or city where the scene is placed? Emphatically, no! Boys and girls, as a rule, are not interested in critical, or historical, or biographical introductions of any kind. The important thing for them is the play itself, and the teacher will do well to begin the reading of it with as little preliminary discussion as possible.

Should the play be read through rapidly in class in whole or in part, for the sake of the story, before the actual study is begun? Such a reading does not usually bring sufficient returns for the time it takes. Besides, in the case of most plays there are difficulties at the very outset, which must be studied before the play can be properly understood. It is a question moreover, whether a preliminary reading does not to some extent take the "edge" off the pupils' interest.

Just how much of the play shall be read or how closely it shall be studied during the first reading must depend largely upon the mental attainments of the pupils and upon the difficulties which present them-

selves in the play. The following plan is suggested for a first lesson in the teaching of *Julius Caesar:*

(*a*) *Teacher's Preliminary Explanation.*—"To-day we begin the study of Shakespeare's *Julius Caesar.* Before beginning to read, let me write down the names of the three most important characters in the first half of the play—Caesar, Brutus, Cassius. You will also find that Casca appears frequently, but he is a minor character. The events of the first act in the play are supposed to have taken place 44 B.C. (write on blackboard) shortly before the assassination of Caesar. Now let us read the first scene."

(*b*) *Reading Scene* 1.—Several methods may be followed in the reading, the teacher may assign to certain pupils the different parts and ask them to stand up and read, or the teacher may prefer to do the reading himself. This is generally preferable, because the teacher knows the passage and is best able to express its spirit. But what about the difficulties? Shall the teacher interrupt the reading and explain each difficulty as he comes to it? Or shall he wait until part of the scene is read and then go back to the difficulties? It is impossible to lay down any hard and fast rule, and the best teachers follow both methods according to the nature of the passage. Whatever method is followed it is best not to question on minute details, on this reading. In the Middle and Upper Schools the scene will be read a second time for the sake of the minor points of interpretation. In any case the important thing is that the teacher, either by his reading or by his questioning, or both, should make the scene vivid to the class. *The two first essentials to a successful teacher of literature are that he should use his imagination and see the scene for himself, and that he should be able to read with expression.*

II. What Kinds of Questions should be Asked?—It is important that the teacher's questions should be such as to stimulate the pupils' interest rather than deaden it. The teacher who spends the whole lesson period in questioning on meanings of words and phrases does not usually arouse much enthusiasm. On the other hand, the teacher whose questions relate entirely to the subject-matter often finds that the pupils' knowledge is very vague and inaccurate. It is impossible to give specific directions as to what form the questions should take; but at least two general principles may be laid down for the guidance of the teacher:

1. *The teacher's first aim should be to lead the pupils to understand the meaning of a passage as a whole,* and to see the bearing of the thought upon the development of the play.

2. *Questions as to meanings of words and phrases should grow out of the effort of the class to interpret the speaker's thought and feeling.* If possible, the teacher should endeavour to bring out the meaning of various expressions by indirect questioning as to what the speaker wished to say,

rather than by point-blank questions as to dictionary meanings. In following this method he will sometimes find it advisable to reverse the usual type of question, and after stating the thought, to ask the pupil to point out the phrase in which it is stated. In most cases also the teacher will find it of advantage to question on the important details first and to neglect the unimportant details. Sometimes it is advisable to ignore certain words and phrases altogether, or at least to leave them for a second reading of the passage. There are many difficulties which the teacher cannot hope to take up with Lower School classes, but in the Middle and Upper Schools the examination requirements unfortunately make it necessary to analyse difficult expressions wherever they occur.

III. What Method should be Followed in the Study of Character and Plot?—Since the chief interest of the class lies in the study of the human elements in the play, it follows that the development of character and plot should form the basis of the class-work from day to day. Some teachers leave the study of the play, as such, until they have dealt fully with the verbal difficulties; but, as we have seen, this method reduces the study of the play to a mere word-grind. When the reading of the play is finished, the only thing remaining to be done should be to gather up and group together the related details. After *Julius Caesar* is read the class should, for example, be ready, without further help, to go back and enumerate the mistakes of Brutus or trace the character of Antony throughout the play. In High School classes it is not usually necessary to examine the evidence as to the date of the play, the verse tests, the sources of the plot or the historical basis of the story. In Upper School classes after the study of the play has been completed the pupil may be directed to read what the great commentators have said regarding the characters and the plot; but in the Lower and the Middle School the study should be based entirely upon the text itself, and pupils should be led to form their own judgments.

IV. In what Way should the Play be Reviewed?—In most schools it is impossible to find time to read a play closely a second time. It is, however, worth while to have it re-read rapidly. The interest in the re-reading is generally greater if the pupils are assigned the various parts; and if it is possible for the pupils to present certain scenes in character it adds greatly both to the understanding and the interest of the play. In the Middle and Upper Schools where a detailed review must be made, the usual review methods must be employed. The teacher may give written tests, or may send pupils to the blackboard to explain the difficulties in certain passages, or he may conduct a rapid oral review. The best results are, however, obtained where the pupils themselves seriously undertake the review and present their difficulties to the teacher for explanation.

The -ing Forms in English

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IN the last number of THE SCHOOL, I notice an article on this subject. I think the use of the term "infinitive in -ing" is confusing to the student, and that the term "infinitive" ought to be reserved for those forms of the verb before which we may use "to"; such as, "to love", "to go", etc., since these forms perfectly conform to the uses of what is called "the infinitive" in other languages. It appears to me to be a mistake thus to apply a grammatical term that has for so many years been reserved for one particular use of the verb, especially as there is no need of the term, and the use of it leads to so much confusion in the mind of the student. I offer another way of treating these forms which I think meets every case which can arise.

A. Adjectival Relations.—As there are three relations in which adjectives may stand, Appositive, Predicative and Attributive; *e.g.*, the man *good* at ball, the man is *good*, the *good* man; so there are three adjectival relations of *-ing*.

(1) The true present participle, which is always appositive. The man swiftly *crossing* the stream is drowned. Here the verb meaning is prominent. *Crossing* is modified by an adverb and (being transitive) governs *stream*. Its adjectival force, too, is plain, modifying *man*.

(2) *The Predicate Relation:* (*a*) Forming progressive tenses; the man *is* swiftly *crossing* the stream. There is little adjectival force. The verbal force predominates. Being transitive it governs *stream*. Its modifier is an adverb. (*b*) In a predicate adjectival relation; he came *running* swiftly, I saw the man *running*, he was caught *stealing*, he can shoot (things) *flying*. Here too the verb meaning is plain. Its modifier must be an adverb. If transitive it can govern. He was caught *stealing sheep*. The predicate adjectival relation too is plain. In Latin or Greek it would show by form its agreement with noun or pronoun in each case, which would make plain its adjectival force. German also uses a participle in such a position, Er kam *gelaufen*. Compare, he came exhausted, in English.

(3) *The Attributive Relation.*—The swiftly *crossing* team; the *running* stream; the *trotting* horse (*i.e.*, the trotter) and the *running* horse (*i.e.*, the runner) are both here. Here the verb meaning fades and the adjective meaning predominates. The modifier must be an adverb.

B. Noun Relations.—The transition from adjective to noun is easy; hence we have noun forms from these.

(1) *The Gerund or Verbal Noun.*—The man, in swiftly *crossing* a stream, was drowned; *crossing* a stream is difficult; I fear *crossing* a stream. Compare Latin, in *petendo* pacem. Here in each case we have a full noun relation, but the verb meaning is plain, for *crossing*, if modified, must have an adverb, and if transitive may govern a case. There is too a trace of adjectival relation to *man*. We cannot say, In carelessly *crossing* the stream, the knife was lost. The mind demands some noun in the sentence for crossing to qualify. This to me is a proof that the original relation was adjectival, *i.e.*, the word came from a participle, not an infinitive.

(2) *Abstract Noun.*—In the swift *crossing* of the stream the man was drowned. This about equals, the man in the *passage* of the stream, etc. Farming (*i.e.*, cultivation) of land is laborious. Good farming pays, John's farming (cultivation) is good. Here in each case we have an abstract noun. The verb meaning has nearly faded out, the noun meaning is predominant. It can no longer govern. If modified it must be by an adjective or a possessive case. It may take *the* before it, and *of* after it. (Another expression is sometimes found to convey the same meaning. There is no use of *him coming*, we knew nothing of John *coming*. Compare, Latin, in *petenda pace.* These, if allowed as good English, are participles qualifying the noun or pronoun. In the early development of this construction (1) and (2) were often blended, In the *sending* reports, care should be taken. Here the abstract noun still retains its power of governing, but is qualified by an adjective, *the.*

(3) *The Common Noun.*—In some cases a further step is taken and the form in *-ing* becomes a pure common noun that can be pluralised, etc. The verb force has entirely faded out. The *crossings* are wet, these *holdings* are in the next county, we shall not take these *leavings.*

NOTE—Sometimes the expression will be ambiguous. Farming is laborious. If this means, "Cultivation is laborious", we have the abstract noun, but if it means "To farm is laborious", we have the gerund.

Teacher—If you had twenty-five children visiting you and only one apple for them, what would you do?

Little Boy—I'd wait till they went, an' then eat it myself.

"Please, teacher, ought I to be punished for something I have not done?"

"Certainly not."

"Well, then, I ought not to be punished if I have not done my sums."

Current Events

The Nobel Prize.—About fifteen years ago Alfred B. Nobel, the inventor of dynamite, left, by his will, a fortune of $9,000,000.00 to found a series of five prizes awarded annually to those men who had achieved respectively the most important results in the fields of physics, chemistry, medicine, idealistic literature, and the promotion of international peace. Altogether some sixty-five of these prizes have been awarded, of which apparently eight have gone to English-speaking people. Some of the most familiar names recognised in the list of prize winners are Roentgen, Mme. Curie, Marconi and Professor Rutherford of McGill University. President Roosevelt was awarded the prize for his efforts in bringing to a conclusion the Russo-Japanese war.

Twice has the prize in idealistic literature been awarded to British subjects, first, some years ago, to Rudyard Kipling, and only a few days ago to Rabindranath Tagore, the beauty of whose lyric poems, which he has translated into rhythmic English with a simple and curious charm, has thus been made known for the first time to many English-speaking people. Curiously enough, both of the British poets thus recognised have drawn their inspiration from India.

The five prizes, which are awarded in December each year, consist of gifts of $40,000.00 each and are awarded as follows: those in physics and chemistry by the Swedish Academy of Science, that in medicine by the Caroline Institute of Stockholm, that in literature by the Swedish Academy of Stockholm, and that for the promotion of peace by a committee of the Norwegian legislature.

The Making of a Republic.—The President of the Chinese Republic, like the Dictator of Mexico, has been having trouble with his parliament and has at length solved the problem after the manner of Huerta. Finding a large section of its more radical members bent on limiting his powers by law and determined to tie the hands of the executive until this was done, he forcibly expelled, a few weeks ago, some three hundred of them. Thus China, like Mexico, is practically governed, for the time being, by a dictator.

The position of Yuan Chi Kai reminds us, in some respects, of that of Oliver Cromwell. After the forced resignation of the Manchu dynasty in 1912, a step to which they were driven by the successful revolt of the republicans in Southern China, led by Sun Yat Sen, Yuan Chi Kai, who had been high in the councils of the Manchu dynasty, was recognised as leader of the constitutional party at Pekin. Thus China was divided between the conservative constitutional forces of the north and the successful Republican party of the south.

There was no recognised authority anywhere. Armed risings occurred in different places, taxes were not paid and the outlook for a united China under any form of government was very dark. Foreign governments and money lenders stood aloof. In the hope of effecting a union of all China under a republican form of government Sun Yat Sen patriotically resigned his position and agreed to the election of Yuan Chi Kai as president. But the task of reconciling different ideals of government is not an easy one. It is impossible to measure accurately the merits or the unselfishness of the aims of the rival parties and their leaders. Yuan Chi Kai, having obtained generous loans from European capitalists, has been more than successful in maintaining his authority. Sun Yat Sen is in exile and his party expelled from parliament. As in Cromwell's case, there are many who suspect the new dictator of aiming at a crown for himself. At any rate he sees the present necessity of prompt and unfettered action in quelling disturbances and in satisfying foreign nations that some sort of firm and stable government has been re-established in China. The three hundred and twenty-five million inhabitants of China cannot be fitted for constitutional government in a day by any act of parliament. Those who followed with interest the progress of Christian Missions in China are much disappointed at the apparent intention of the present government to recognise once more Confucianism as the State religion of that country.

Responsible Government in Germany.—The events of the last three weeks in Southern Alsace have drawn the attention of the world to the strength to which national feeling still persists amongst the French inhabitants of Alsace-Lorraine. A very indiscreet young cavalry officer, in giving instructions to some recruits, seems to have encouraged them in very high-handed treatment of the French inhabitants. Feelings of resentment led to violence on the part of the militia which has been followed by serious rioting throughout the southern part of Alsace.

An interesting feature of the case is the manner in which the disturbances were dealt with in the German Reichstag. By a very large majority, made up largely of Socialists, the Reichstag expressed lack of confidence in the way in which the matter had been dealt with by the chancellor. Such action in our legislature would be followed by the resignation of the executive. But not so in Germany. The chancellor regards himself as responsible, not to the parliament, but to the Kaiser. He maintains that there is nothing in the constitution requiring him to resign, and that "no German statesman imbued with monarchical principle, could for a moment consider such a concession to the parliamentary idea". He would not substitute "the yoke of socialism for the harness of the Kaiser's authority". W. E. M.

Hints for the Library

The Pitt Press Series of English Classics. Cambridge University Press, London. Three of this series have been sent us for review. Edmund Burke: *Thoughts on the Cause of the Present Discontents.* Cloth, 2*s.* 6*d.* Byron: *Childe Harold's Pilgrimage.* Cloth, 2*s.* 6*d.* Pope: *Essay on Man.* Cloth, 2*s.* These editions furnish readable and reliable texts of these masterpieces at a reasonable price. Each has an introduction, also excellent notes which explain involved passages and supply a commentary on the historical and literary allusions.

Cambridge Manuals. Cambridge University Press, London. Cloth, 1*s.*, leather, 2*s.* 6*d.* There are eighty volumes in the series, covering the subjects of History and Archaeology, Economics, Literary History, Philosophy and Religion, Education, Law, Biology, Anthropology, Geology, Botany, Physics, Psychology and Industrial and Mechanical Science. One should ask for a list of titles. The two volumes we have received, *The Evolution of New Japan* and *The Fertility of the Soil* are well illustrated and exceedingly well written. These manuals constitute a good library in themselves, and should be considered when making additions to the School Library.

Bell's Sixpenny English Texts. G. Bell & Sons, London. Of this series we have received Plutarch's Lives of Caesar and Cicero, Selections from Chaucer, Macaulay's History of England (chapter 3), Poems by Lord Byron, English Elegiacs, and Poems by John Milton. The text of each is very clear and readable, and each volume contains an introduction dealing with the life and work of the author. At a very slight cost a School Library may be equipped with a large number of English Classics from this source.

Bell's Poetry Books, in seven parts. Each contains 48 pages. Price 3*d.* in paper covers, or in limp cloth, 4*d.* each. G. Bell & Sons, London. These little volumes contain a great number of standard poems carefully graded so as to be suitable for each of the classes in our schools. The range is from such poems as "Kitty and Mousie" in Part I to Gray's Elegy in Part VII. Besides being useful for class-work in each grade, they furnish varied selections for "sight" literature.

Exercises and Problems in English History, 1485-1820. W. J. R. Gibbs, Cambridge University Press. A series of extracts taken from the source books of Arber, Adams, Morse Stephens and others, each followed by pertinent questions well calculated to test the student's knowledge of these books. The aim of the scheme is to present a type of exercises which does not necessarily demand the essay form of answer and which

thereby reduces the amount of correction without sacrificing the worth of the problem. The book is one which will prove very useful to any teacher of upper school history who is making use of source books in his work. H. G. M.

Practical Drawing, by R. M. Metcalfe, A.R.C.Sc. London, Edward Arnold. Price 2*s.* net. As the title implies this book is a very real and very successful attempt to present the subject of drawing in a practical way. Geometrical and technical drawing are correlated in such a manner as to give significance to both. Every problem has in view either directly or in anticipation some practical application in real affairs. It would be impossible in a brief review to give an adequate idea of the value of this work, with its chapters on instruments and their use, parallel lines, scales, circle, right angle, triangles, similar figures, tangents, simple oblique views, plans and elevations, sketching of objects, orthographic and isometric projections and simple surveying. The illustrations, of which there are very many, are excellent. The author must be both an artist and a practical engineer to produce a work of such worth.

A. N. S.

The Drafting Room Series, by Frederick H. Evans, M.E. Manual Arts Press. Price complete with cards, $2.00. This is a work in three parts: Part I, Reading Machine Drawings, consists of twenty pages. This is a work for beginners designed to teach the reading of drawings. Part II, Machine Drafting, containing 48 pages, deals very fully with the following: "The Drafting Room", "Detailing", "The Instruments", "Rough Sketch", "Blocking Out", "Finished Drawing", "Tracing" and "Geometrical Construction". Part III, Interference of Moving Parts and Tooth Gears, contains 40 pages. The subjects treated are "Interference of Moving Parts", "Transmission of Motion by Moving Contact", "Tooth Gears" and the "General Principles of Conjugate Curves". It gives problems dealing with all the phases of tooth gears. Accompanying these three pamphlets are 54 cards, containing problems, with suggestions for the correct method of working out. All are contained in a neat filing box, the lid of which may be used as an easel to hold the card when in use by the student. The author is a practical draftsman, engineer and teacher and has produced a work worthy of the attention of every teacher of machine drafting. A. N. S.

Salamis. An adaptation of part of Herodotus in easy Attic Greek, by G. M. Edwards, M.A., Fellow of Sidney-Sussex College, Cambridge. Cambridge University Press, 1913. Pp. 78. Price 1*s.* 6*d.* This little book presents some admirable material for sight reading in first or second year Greek classes. The re-written text is mainly Attic and the subject-matter is varied and interesting. J. O. C.

Notes and News

Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this section.

Mr. J. M. Fleury has been appointed Provisional Inspector of Bilingual Schools in New Ontario, succeeding Mr. Henri St. Jacques, who has resigned to study law.

Mr. F. A. Stuart has resigned his position as science master in London Collegiate Institute.

Mr. C. C. Roe of Georgetown has been elected president of the Halton County Teachers' Association.

The School records with pleasure the gallant act of Principal Patterson of Delorimier School, Montreal, in saving one of his pupils from drowning at considerable personal risk.

The citizens of Niagara Falls have shown their appreciation of the work of Miss Margaret Henderson by presenting her with a purse of $400 on the completion of fifty years' service as a school teacher.

Miss Eleanor Nugent, B.A., one of last year's graduates of the Faculty of Education, Toronto, has been appointed to the staff of Cornwall High School.

Miss Sidney W. Nichol, M.A., Toronto, has become an assistant in the Orillia Collegiate Institute.

Mr. R. A. Hutchison, B.A., Inspector of North Ontario, has been transferred to the Inspectorate of South Ontario, *vice* Mr. R. H. Walks, B.A., who has been appointed to the staff of the Toronto Normal School. The inspectorate of North Ontario has been filled by the appointment of T. R. Ferguson, M.A., the headmaster of Uxbridge High School.

It is interesting to note that London Public School principals favour the abolition of the High School Entrance Examination, while Principal Rogers and practically the entire staff of the Collegiate Institute take the opposite view.

The trustees of the Ayr Continuation School propose starting a course in agriculture under the supervision of a competent specialist. This is the initial step in this direction in the province.

At a recent meeting of the Advisory Industrial Committee of the Toronto Board of Education a motion was carried advocating an appeal to the Legislature for an eight-hour working day for children, it being stated that many children of fourteen worked more than ten hours a day and then attended night school.

One of the latest Oxford movements is an association to encourage the campaign for the speaking and writing of pure English, which has been started by Robert Bridges, the Poet Laureate.

Mr. W. J. Feasby, B.A., has been appointed Principal of Collingwood Collegiate Institute.

Mr. James R. Howie, formerly of Tavistock, has been appointed to the staff of the Ottawa Collegiate Institute. The increased attendance has made additions to this staff necessary.

Mr. Lorne J. Williams, B.A., formerly Principal of Oakville High School, has been appointed Principal of the High School in Medicine Hat, in succession to Mr. M. E. Lazerte, M.A., recently appointed Inspector of Schools of Bassano.

Miss E. M. Macdonald, B.A., formerly of Bothwell, is now Principal of Chesterville High School.

Mr. W. Bellamy, B.A., formerly Principal of Colborne High School, has been appointed to the same position in Oakville High School.

Mr. Alex. Pearson, B.A., Principal of Dundas High School, has accepted the Principalship of Weston High School.

Mr. Geo. E. Pentland, B.A., of Waterford will teach Mathematics in Weston High School this year.

Mr. F. W. Aylesworth, formerly of Chatham, has been appointed Principal of one of the Public Schools in Port Arthur.

Miss E. Josephine Redmond, B.A., of Queen's '12, is teaching History and French in Warkworth Continuation School.

Mr. A. R. Girdwood, B.A., of St. Catharines Collegiate Institute, has accepted the principalship of the High School in Camrose, Alta.

Miss Hilda Bruce, formerly of Aurora, a graduate of the Faculty of Education, Toronto, is teaching in the Central Public School, Ingersoll.

The Educational Banquet given by the Moose Jaw Schools on November 21st was a great success. Nearly 300 were present. Superintendent Sifton did the work of organisation. Among the speakers were Principals J. K. Colling, B.A., and W. T. Cunningham of the Collegiate and Public School respectively; Inspector Hawkings, B.A., Librarian A. H. Gibbard, B.A., Mayor Pascoe and several of the teachers and trustees. A function like this must do great service in bringing to the educational interests of a community the recognition which is their due.

The Berlin Board of Education has made an advance in salaries for 1914. Principal Carmichael will receive $1,500, four principals of ward schools $1,100 each, and the schedule for lady teachers will be $550 to $750. The Board has also secured two sites of three acres each for new schools.

In connection with the advertisement of the Berlin Photographic Company in our December issue, the word "copyright" under the illustration was inadvertently omitted. The illustration used was the "Vicar of Wakefield" by Dicksee, and the copyright is held by the firm mentioned.

The following works, published by Isaac Pitman & Sons, 2 West 45th Street, New York, have been officially adopted for use in the Day and Evening High Schools of New York City for 1914: Taquigrafia Espanola de Isaac Pitman (list No. 7618); Clave de la Taquigrafia Espanola de Isaac Pitman (No. 7619); Marsh's Elementary German Commercial Correspondence (No. 7574); and Pitman's German Commercial Reader (No. 7579).

Mr. T. C. Tice, formerly Principal of Napanee Model Schools, is now Supervising Principal of Oshawa Public Schools.

Among a large number of schools adopting the Isaac Pitman Shorthand may be mentioned the well-known McGill University of Montreal, Canada.

Miss Margaret E. McNab has been appointed to the staff of Blyth Continuation School.

It is the purpose of the editors of this journal to have as a frontispiece each month a masterpiece of a Canadian artist accompanied by a brief appreciative sketch. Teachers would do well to preserve these for picture study in their art classes. The first of the series is "The Coming of the White Man", by G. A. Reid, R.C.A., Principal of the Ontario College of Art.

Many of the principals of smaller high schools and collegiate institutes have recently taken positions as masters in the larger schools. The mathematical department of London Collegiate Institute is now in charge of two ex-presidents of the high school principals' section of the O.E.A., S. Martin, B.A., formerly Principal of St. Mary's C.I., and J. Elliott, B.A., formerly Principal of Bowmanville H.S.

County School Inspector Ballard, lecturing before the Child Study Society at London, expressed his belief that interference with natural left-handedness is likely to cause stammering.

The ever-increasing demand for technical education is shown by the fact that at Hull, England, a school for the purpose of training men for the fishing industry has been built. Instruction is given in navigation and seamanship as well as in the other branches of the work.

Graduates and undergraduates of the Faculty of Applied Science and Engineering, University of Toronto, held a dinner on December 5th, to celebrate the fiftieth anniversary of Dean Galbraith's entrance to the university and the thirty-fifth anniversary of his founding of the School of Practical Science.

That the O. C. A. is giving ample justification for its reorganisation and governmental assistance was quite manifest to the visitors at its first commencement on December the fifth. In fitting words Principal Reid referred to the aims of the College and the success already attendant upon its efforts. Dr. Loudon, chariman of the College Council,

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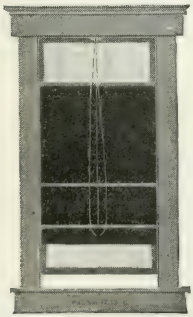

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spoke of the uncertain public support accorded to former institutions from 1876 to the incorporation of the present college in 1912 for "the training of students in the Fine Arts, and in all branches of the Applied Arts in the more artistic trades and manufactures", with substantial government support. Sir Edmund Walker, after citing the earlier efforts made in Toronto in 1834 and again in 1847 and 1848, compared the progress made in art by Canada with that made by the United States at a similar period of their history, much to the advantage of the former. The aims of the National Gallery at Ottawa were explained and future plans stated regarding the art collection at "The Grange" and the opening of the Bloor Street Museum in February. An interesting part of the afternoon's programme was the distribution of scholarships, prizes and certificates to successful students.

Nebraska is responsible for a new departure in prison reform. Convicts in the State penitentiary are to be permitted to enrol as students in a correspondence course given by the University of Nebraska. The course is calculated to make the men better satisfied while in prison and to assist them materially in securing positions when released.

Those interested in child-welfare work will be pleased to note that Dr. Struthers reports very satisfactory results from the past year's work at the Forest School at Victoria Park, Toronto.

Two strong present-day tendencies in education are emphasised by the fact that the use of public schools as social centres and the more efficient physical training of the pupils are two outstanding planks in the platform of a candidate for the Toronto Board of Education.

A resolution has been passed unanimously in the Saskatchewan Legislature, requesting the Dominion Government to transfer the control of the school lands of the Province to the Provincial Government.

At the meeting of the Protestant Committee of the Council of Public Instruction of Quebec, the Provincial Treasurer announced that the Government would make a grant of $6,000 for the purpose of consolidating rural schools and the conveyance of children to the establishments.

Miss Violet E. Stevens, a recent graduate of the Faculty of Education, University of Toronto, is teaching science in Wheatley Continuation School.

Miss Lula M. Philp, B.A., of Alma Ladies' College, has been appointed to the staff of the Berlin Collegiate and Technical Institute.

Miss Blanche Hales of Hampton has been appointed to the staff of Millbrook Public School as teacher of primary work.

Miss Lottie E. Hainer of Aurora will teach Latin, French and English in Norwich Continuation School this year.

Miss Kathleen Cowan, B.A., of Napanee will teach Classics and Ancient History in Barrie Collegiate Institute this year.

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NOVA SCOTIA

The regular course of the Agricultural College at Truro opened November 4th. About 100 are in attendance.

L. A. DeWolfe, of the Provincial Normal College, has been appointed Director of Rural Science Schools for Nova Scotia. He still remains on the staff of the Normal College, but his Rural Science work is under the Department of Education. The expense of this work, however, is borne by the Department of Agriculture.

Inspector H. H. McIntosh of Lunenburg held a very successful Teachers' Institute at Caledonia, Queens County, November 6th and 7th. Those present had the opportunity of observing good lessons well taught, and of hearing intelligent discussion on methods adapted to rural schools.

Inspector E. Robinson of Canning and W. R. Campbell of Truro held a joint Institute at Stewiacke, November 27th and 28th. Here, too, teaching model lessons was the strong feature.

The Agricultural Societies of Halifax County have voted a good sum of money to offer as prizes at the County Fair next autumn. These prizes go the the school children or children's clubs for vegetables and flowers they may grow in their own gardens.

One kid story leads on to another. A Cleveland school teacher—one who has at several periods in the sweet-scented past favoured us with anecdotes about her pupils—sends us an account of a quiz conducted in her geography class only a day or two ago, says the Cleveland Plain Dealer.

"In what zone do we live?" asked this teacher.

"The temp'rut zone!" chanted the well-drilled class.

"Right. And what do we mean by 'temperate'? Willie, you may answer."

"Temp'rut is where it's freezin' cold half the time an' roastin' hot the other half the time."

If Willie wasn't sent to the head for that it wasn't because he didn't deserve the honour.

Willie—Say, pa, didn't you tell me the other day that it was wrong to strike any one smaller than yourself?

Pa—Yes, Willie, that's what I said.

Willie—Well, I wish you'd write my teacher a note to that effect. I don't think she knows about it.—*Philadelphia Ledger.*

TURNING THE HARROW
By Horatio Walker.

Owned by the Metropolitan Museum of Art, New York. By permission of the Publisher. N. E. Montross. New York.

There is a society continually open to us, of people who will talk to us as long as we like, whatever our rank or occupation; talk to us in the best words they can choose, and with thanks if we listen to them. And this society because it is so numerous and so gentle,—and can be kept waiting round us all day long, not to grant audience, but to gain it—kings and statesmen lingering patiently!—in those plainly furnished and barren ante-rooms, our bookcase shelves, we make no account of that company—perhaps never listen to a word they say, all day long!

RUSKIN—*Sesame and Lilies.*

Vol. II. TORONTO, FEBRUARY, 1914. No. 6.

The School

"Recti cultus pectora roborant"

Editorial Notes

The Schoolmaster as a Citizen.—An effort was made in the Board of Education two or three months ago to stifle in the Toronto teachers all active interest in politics. When a High School principal in a small Ontario town took the platform a few weeks ago in support of the Hydro-Electric, he was advised rather bluntly "to keep out of such things". An Ontario Public School principal appealed to the courts a few days ago against a trustee who, he alleged, threatened him with dismissal because he would not vote against local option.

All this provokes the inquiry—Is the schoolmaster not a citizen? With his trained intelligence, is he not as wise a citizen as some of those who appear upon civic platforms? He is deemed competent to train the citizens of the future, is he to be denied his place among the citizens of the present? Should the performance of a high duty for the State deprive him of his share in the privileges of citizenship? The chief danger to modern democracy lies in the blind following the blind. Are not the teacher's training, his impersonal view of public questions, his character which must ever bear the keenest scrutiny, the best guarantees of that independence of thought and conduct which should lead democracy?

Medical Inspection in Rural Schools.—The Women's Institutes of Ontario have begun to discuss the question of the medical inspection of rural schools with much enthusiasm. The Minister of Education and the District Medical Officers stand ready to endorse their conclusions. Despite the obvious difficulties of low revenues and sparse population, it is practically certain that medical inspection will obtain throughout the rural schools of Ontario before the end of the decade.

In this connection it may be interesting to note the claim of an American authority* that the rural school stands in greater need of medical inspection than the urban school. If there is need of medical inspection, he says in substance, in large centres where competent

*See Bulletin No. 44, 1913, Bureau of Education, Washington.

doctors abound and free medical and dental clinics are always available, much more need is there in rural districts where doctor or dentist is appealed to only in serious cases, where houses and schools are less well heated and ventilated, where tuberculosis is less well understood and the chances of "house infection" therefore greater, where public sanitation is almost entirely neglected. Contrary to the general impression, country children are not naturally more vigorous than city children. Children in the country are more exposed to unfavourable weather conditions than are city children. They often walk long distances in extreme heat, cold, or wet, and sit in school with damp clothing or wet feet. They almost invariably wear too much clothing indoors in cold weather, and are consequently overheated in the school-room and then are chilled on the way home. Under such conditions it is no wonder that colds and other respiratory disorders are common, and that many country children are out of school on account of various kinds of sickness.

The sanitation of a rural school is usually very bad. The common drinking cup hangs from a nail over the water pail; floors and desks are often very dirty; ventilation is a negligible quantity; outdoor toilets are in unspeakable condition; washing facilities are either not provided at all, or consist of a pail of water, a dirty tin basin, and one common towel.

All of this may not apply to the rural schools of Canada, but that some of it does apply is the opinion of Dr. Annie Backus, of Aylmer, Ontario, an authority upon school sanitation. Dr. Backus asserts that 50% of the children in country districts are physically defective, the chief troubles being adenoids, defective vision, and deafness. She also asserts that the sanitation in most of the rural schools is bad and the lighting poor.

Fifty Years Ago.—A reader of THE SCHOOL who revels in musty tomes has dug some figures about the Grammar Schools out of Ryerson's Annual Report of 1862. He has sent them to this office with his comments.

The three grammar school inspectors of 1862 were clergymen. And so were the Superintendent of Education, twelve headmasters of Grammar Schools, and most of the Council of Public Instruction. "For good or for ill", the comment runs, "the clergyman and the teacher are no longer one in Ontario."

There were 91 Grammar Schools in 1862. Of these, the schools at Ancaster, Scotland, L'Orignal, Richmond, Lanark, Bath, Consecon, Oakwood and Milton have ceased to exist. In 1912 there were 148 High Schools and 138 Continuation Schools. "A healthy growth, surely!"

Sixty of the Grammar Schools of 1862 had only one master each, and only five schools had more than two masters. In 1912 no High School

had only one master and all but nine had more than two. The Schools of 1862 average much less than two masters each. Those of 1912 averaged more than six masters each. "The age of the specialist is upon us!"

Of the 91 headmasters of 1862, 64 held degrees in arts and 27 held lower certificates. Of the graduates in arts only 37 came from Ontario. Three came from the United States, four from the Maritime Provinces, and twelve from Ireland. Indeed, the Irish universities claimed more than Queen's, Kingston (10) and almost as many as Toronto (15). "Ireland bulked large in grammar school as well as common school teachers in 1862, but Ontario drove all countries from the field in despair long before 1912!"

Headmasters moved about much in those days. About one-third of them had not completed the first year, more than two-thirds had not completed the third year, only four had completed the tenth year of service in their present schools. "And there were giants in those days. D. J. Macdonnell was the headmaster at Wardsville, James A. McLellan at St. Mary's, William Tassie at Galt, J. Howard Hunter at Beamsville, Arthur Marling at Newmarket, Samuel Woods at Kingston, and Rev. W. H. Davies at Cornwall. All these travelled fast and far both inside and outside the schoolroom. Gilbert D. Platt, headmaster of Gananoque in 1862, resigned two years ago the inspectorship of Prince Edward, and withdrew to private life full of years and honours. Only one of the headmasters of 1862 remains in educational work, and he, the youngest of them all and well under age, was headmaster at Brampton. To-day as Superintendent of Education for Ontario he still does the day's work of two men to remind us that there really were giants in those days!"

A teacher in a primary school was endeavouring to make clear to her class the meaning of the words "equestrianism" and "pedestrianism" when she put this query to one small boy:

"What is a pedestrian?"

"He is one of those fellows," said the boy, "who makes an awful kick when an automobile runs him down."—*New York Press.*

Teacher—Children, I want an appropriate motto to hang over the school door. What motto would you suggest?

Willie Hicks—"We study to please."

"Willie, you mustn't fight any of the boys in your class."

"Well, if you think I'm going out of my class and go up against some 110-pound guy you're mistaken."

Algebra is Generalised Arithmetic

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IT is agreed among teachers that elementary algebra is a generalisation of arithmetic both in matter and method.

In most text-books on algebra the introductory chapter refers particularly to this close relationship between the two subjects. The attention of the pupil is drawn to the fact that the symbols a, b, x, etc., which we use in algebra, represent the common numbers of arithmetic. But this close relationship is usually soon lost sight of. Beyond the problems in which the values of algebraic expressions are to be found for particular values of the letters involved, where do we find any reference to the relation between the two subjects?

There are many processes in algebra which may be deduced from similar ones in arithmetic by a simple generalisation of method. I propose to give a few illustrations, which are not intended to be exhaustive, but are merely for the purpose of showing what might be done along this line.

Problem.—Add 124, 213, 412.

$$\begin{array}{rcl} 124 & = & 1.100+2.10+4 \\ 213 & = & 2.100+1.10+3 \\ 412 & = & 4.100+1.10+2 \\ \hline 749 & = & 7.100+4.10+9 \end{array} \qquad \begin{array}{rcl} & & 1h+2t+4u \\ & & 2h+1t+3u \\ & & 4h+1t+2u \\ \hline & & 7h+4t+9u \end{array} \qquad \begin{array}{l} 1a+2b+4c \\ 2a+1b+3c \\ 4a+1b+2c \\ \hline 7a+4b+9c \end{array}$$

Here the pupil begins with a problem in arithmetic and ends with a problem in algebra. In principle there is no difference in the two operations. The pupil who understands the one must understand the other. The algebraic is really simpler than the arithmetical as there is no carrying to be done. On the other hand, the algebraic may contain negative numbers, which do not appear in arithmetic. The introductory operations in algebra, however, should contain only positive numbers, and in deducing them from arithmetic we should choose arithmetical problems in which no carrying is to be done. Once the method is understood for positive nembers, the application to negative numbers will offer little difficulty.

In the arithmetical problem we began with digits the denominations of which were powers of 10. For these we substituted the letters, h, t, u, which represent these denominations. Finally we substituted the letters a, b, c, which represent any numbers. The converse problem

would further impress on the pupil that the operation here is purely an arithmetical one. When he has added a number of expressions in algebra he should substitute numerical values for the letters involved, and the result of the arithmetical problem would be a verification of the result of the algebraic problem.

$$\begin{array}{rcl} & & a=b=c=1 \\ 6a+\ b-3c & = & 6+1-3=\ 4 \\ a-5b+2c & = & 1-5+2=-2 \\ 2a+\ b-3c & = & 2+1-3=\ 0 \\ \hline 9a-3b-4c & = & 9-3-4\ =2 \end{array}$$

The benefits to be derived from this are:

(1) It keeps constantly before the mind of the pupil that the letters represent numbers.

(2) It gives him excellent practice in substitution (where he sees a purpose for the substitution), and in combining numbers with varying signs.

(3) It affords a verification of the algebraic work. It is true it is not an absolute verification, but it is as nearly so as most so-called verifications are.

The same method might be applied to verify results in the other three simple rules. Of course, it must not be overlooked that results in subtraction and division may be verified by addition and multiplication, but the verification of division by multiplication is liable to become tedious to the pupil.

Problem.— Multiply 32 by 3.

$$\begin{array}{rcrcrcr} 32 & = & 3.10+2 & = & 3t+2u & & 3a+2b \\ 3 & & 3 & & 3 & & 3 \\ \hline 96 & = & 9.10+6 & = & 9t+6u & & 9a+6b \end{array}$$

Problem.— Multiply 21 by 32.

$$\begin{array}{rcrcrcr} 21 & = & 2.10+1 & = & 2t+1 & & 2x+1 \\ 32 & = & 3.10+2 & = & 3t+2 & & 3x+2 \\ \hline 42 & = & 4.10+2 & = & 4t+2 & & 4x+2 \\ 630 & = & 6.10^2+3.10 & = & 6t^2+3t & & 6x^2+3x \\ \hline 672 & = & 6.10^2+7.10+2 & = & 6t^2+7t+2 & & 6x^2+7x+2 \end{array}$$

Problem.— Divide 46 by 2.

$$\begin{array}{rcrcrcr} \underline{2}\,|46 & & \underline{2}\,|4.10+6 & & \underline{2}\,|4t+6 & & 2\,|4a+6 \\ \hline 23 & = & 2.10+3 & = & 2t+3 & & 2a+3 \end{array}$$

Problem.— Divide 483 by 21.

23	$2t+3$	$2a+3$
$21\overline{)483}$	$2t+1)4t^2+8t+3$	$2a+1)4a^2+8a+3$
42	$4t^2+2t$	$4a^2+2a$
63	$6t+3$	$6a+3$
63	$6t+3$	$6a+3$

How much satisfaction a pupil must feel in seeing that the process of division in algebra is practically the same as in arithmetic and that, with little assistance from the teacher, he can develop the method for himself. Compare this method with the arbitrary rules given on page 41 of the authorised text. Those rules would lead the pupil to believe that this new operation was one which he could not himself discover, while as a matter of fact, he is already in possession of it and the method is not new at all, either in form or meaning.

Suggestions for the Class-room

The Teacher.—You can divide all teachers into two classes—the man of clay and the man who has had the breath of life breathed into him. There are first-hand and second-hand teachers—teachers who bring out some new thought, and teachers who overwork the thoughts of others. The teacher should have some originality and assert himself. He should not go about with a perpetual apology for himself in his countenance, as if he were imposing upon others by breathing.—Philander P. Claxton in *American Education*.

Some Things for the Teacher to Think About.—1. How much do you talk in the schoolroom? 2. Is your desk kept in order? 3. Are your boards clean? 4. What is the condition of the chalk tray? 5. Are the erasers cleaned?. 6. How high is the ash-pile in front of the door? 7. What is the condition of the pupils' desks? 8. What pictures are on the schoolroom walls? 9. What is the condition of the yard and outbuildings? 10. Are the pupils as happy in their work as they ought to be? 11. What books do your pupils read? 13. I what are the pupils most interested? 13. How long is the tardy roll? 14. What songs are sung? 15. Who visit the school? 16. How home-like is the schoolroom? 17. What is the relation of the home to the school? 18. Is the floor as clean as it should be? 19. What is the effect of visiting the patrons of the school? 20. What is the training for citizenship?—*Arkansas Sch. Journal.*

Ducks and Grebes

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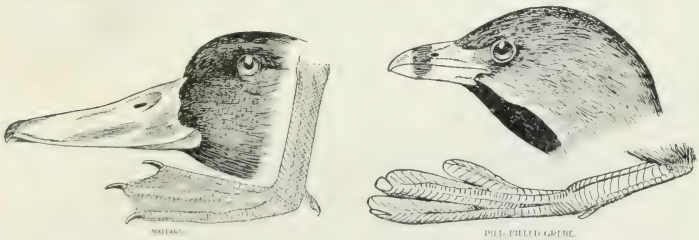
"DUCKS" are not always ducks as I learned some years ago while on my first duck-shooting expedition. It was in Saskatchewan in a foreign settlement. On a school holiday I went out with some of the big boys to get duck for dinner. We saw a number in a slough, but there were two which did not, like the others, fly away when approached. These would dive and swim under water. I fired at one; and, flushed with success, waded out to secure my prize. The boys, however, smiled knowingly and said,—"It's only a diver."

Yes, I may as well confess my ignorance. I then learned, for the first time, that a "duck" might sometimes be a diver, or more properly a grebe. Before the summer was over I learned many of the differences between the duck and grebe. The latter may be easily recognised even at a distance by the habit of sinking slowly out of sight into the water or of diving quickly and swimming under water. A close examination shows differences in the bill and feet.



MALLARD PIED-BILLED GREBE

On coming to the London district about four years ago I received another surprise. While out walking one afternoon in early February, with the temperature below zero, I saw six ducks fly over. I hurried home and telephoned the local ornithologist, only to receive the calm reply that ducks were liable to be seen on the Thames at any time during the winter and that sometimes they came to the forks at the foot of Dundas Street. The realisation of my ignorance of the habits of ducks was very humiliating, but I resolved to inform myself by personal observation. These confessions are made with the hope that others may be encouraged to action after I have related, as I now propose to do, a little of my experience with grebes and ducks in and around London.

The hunting-grounds have been: first, the Thames River, south branch, from Ingersoll to London, and the main stream from the city down six or eight miles; second, three ponds of about 25 acres each, some three miles south of the city. These ponds are more or less surrounded with trees and bushes, so are somewhat secluded. I said hunting-grounds, but understand that no specimens were shot. All the hunting was done with "double-barrelled field glasses".

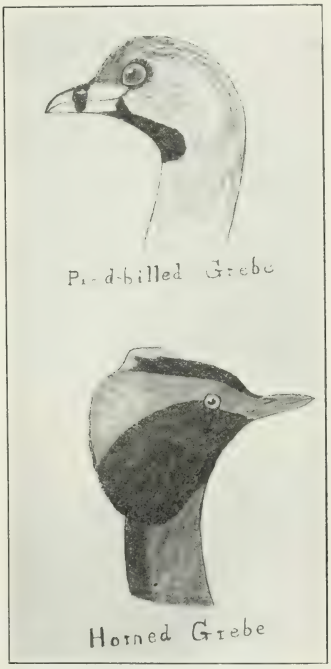
Species observed	1910		1911		1912		1913	
	Dates Earliest to Latest	Greatest Number seen at one Time	Dates Earliest to Latest	Greatest Number seen at one Time	Dates Earliest to Latest	Greatest Number seen at one Time	Dates Earliest to Latest	Greatest Number seen at one Time
Grebes								
1. Pied-billed Grebe	16/4		8/4—18/5	5	4/4—18/5	3	29/3—25/4	
2. Holboel's Grebe			26/4—16/5	1			24/4—8/5	1
3. Horned Grebe			26/4	1	17/4—10/5	3	5/4—28/4	2
Ducks (Mergansers)								
4. American Merganser	25/3—31/3		11/2—2/4	6	4/2—17/4	43	11/1—25/3	15
5. Red-breasted Merganser					27/4	1m		
6. Hooded Merganser					23/3—1/5	25	21/3—5/4	9
Ducks (other)								
7. Mallard							21/3	6
8. Black Duck	25/3—8/4	4	18/4—19/4	2	5/4	2	21/3 and 13/12	13
9. Blue-winged Teal	16/4	1						
10. Wood Duckk							28/4	2
11. Lesser Scaup	8/4		16/5—18/5	2	30/3—5/4		19/4—24/4	9
12. American Golden-eye			22/4	3	4/2—5/4	50	8/2—21/3	3
13. Bufflehead			10/4	3	5/4—17/4	6	19/4—17/5	2
14. Old Squaw					15/2—9/3	2		
15. Ruddy Duck			5/5—24/5	2			24/4—25/4	2
Total	5		9		10		12	

The observations, as indicated by the table submitted, cover a period of four years, during which time a total of three grebes and twelve ducks were seen, some only once, others many times. A comparison of the totals for each year of the four shows an encouraging increase, and probably indicates the possibility of seeing other new species. Indeed, the record of the red-breasted merganser is the only one for Middlesex county.

Of the three grebes seen, the pied-billed is the only one that might be considered fairly common. The observer may count on seeing it several times during the season. The adult in summer has a black band across the bill. The horned grebe is much less common, but the industrious observer is fairly certain of seeing it two or three times during its migrating season. The buffy plumes or horns behind the eye are rather conspicuous even at a distance, and more so on account of the crown, throat and sides of neck being black or blackish. Holboel's grebe was found in

1911 and 1913 only, and at the same place each time, in the most secluded of the three ponds. The same pond was visited frequently in 1912, but no bird was found. Apparently only one individual has visited us each year.

While the grebes seldom attempt to escape by flight, and rise from the water with some difficulty, the ducks, on the other hand, often fly away when alarmed, rising easily from the water. Ducks are conveniently separated into two groups, depending on the structure of the bill. The merganser bill is narrow and serrated to hold the slippery fish on which it lives. But the bill of the black duck is broad and has gutters at the side for the purpose of straining out the water and mud taken while the bird is feeding in shallow water on insects, seeds and roots of aquatic plants. I had several times drawn and asked my pupils to draw the bill of the American merganser, but, until seeing this bird, I thought of it as some far-away object of little interest. My pupils almost invariably do the same kind of thinking. However, when I told them that mergansers stayed for about five weeks at the forks of the Thames beside the Dundas Street bridge, a look of surprised interest spread over their faces. It was during the unusually cold winter of 1911-1912. The river was practically all frozen over except a short stretch at and below the forks. Here were seen as many as forty-three American mergansers at once. Street-cars, delivery-wagons and foot-passengers were continually passing over the bridge only a few rods from the ducks. My records extend from February 4th to March 9th. By that time other parts of the river had become free of ice, and the mergansers were apparently glad to get away from the attention paid to them by the townspeople. The American merganser likes running water, and it is interesting to steal up quietly and watch a flock fishing. They came up one after the other, look



sharply about, then down again. Frequently the fish may be seen in the bird's bill. The hooded merganser, less common than the American, is interesting on account of the large white circular crest, bordered with black.

The remaining ducks will be mentioned but briefly. Three species were seen but once: the mallard on south Thames during a canoe trip from Ingersoll to London, the blue-winged teal on Thames in Springbank Park, and the wood duck. A pair of the latter flew out of a tall tree on the top of Springbank Hill. A pair of old squaw ducks was seen more or less frequently for three weeks at the Thames forks during the cold winter to which reference has been made above. In 1911 a pair of ruddy ducks was seen several times from May 5th to 24th on one of the ponds south; and again in 1913 a pair was seen twice on the same pond.

Of the four left, the American golden-eye and the black seem to be the most common. The heavy frost of January, 1912, brought the golden-eye in considerable numbers. As many as fifteen at once were seen with mergansers at the Thames forks. Fifty were seen in one day on April 5th of the same year, during a canoe trip from Ingersoll to London. The lesser scaup is a rather regular visitor, but does not appear in such numbers. The female, with the white ring around the face at the base of the bill, appears to be a more frequent visitor than the male. The little buffle-head, the male of which is so conspicuously marked with white, seems to be the most fearless of all the ducks. In 1913 a pair stayed on the Thames between the city and Springbank for four weeks or more. The observer could get almost close enough to hit them with a stick.

The ducks and grebes, as a class, are wary birds. This makes them more difficult to study. Many times the observer must be content with seeing ducks without being able to identify the species. The beginner's records will, of necessity, contain many of the "unidentified" variety. This will be especially true unless a good pair of field-glasses is used. These difficulties, however, only make the study of the hunted birds the more interesting.

To enjoy bird study we need an enthusiastic interest, a good pair of glasses, some good books of reference, and some companions equally interested. Unfortunately, in some of the smaller towns, the teacher is usually the only one interested, and even he sometimes finds his interest lagging. But an enthusiastic interest in bird-study on the part of the teacher means a similar interest on the part of many of the pupils. And the teacher will be amply repaid for all efforts put forth in the greatly added interest taken by the pupils in the biology of the elementary science course.

Suggestions for the Class-room

The Religion of Life.—Whatever separates religion from life is distinctly an evil. All of life is religious, just as all of one's body is alive. There is no distinctively religious realm, as apart from other realms. A man is just as religious in his office or his factory as he is in his church. Religion is like a sea that inundates all of life. It finds no higher level in a man's worship than it does in his work. Reality is to be gauged by the lowest level. It cannot rise higher elsewhere, except in waves of feeling. I do not ask concerning your religion. Your life reveals it.—From *Verities* by Charles W. Casson.

Kind of Training for Boys and Girls.—We want our boys and girls trained to see the difference between right and wrong—to care for the right and to hate the wrong. We want our boys and girls trained in the spirit of courage, of heroism, so trained that they will be willing to suffer for their country, suffer in their homes for father and mother, suffer in the state and nation, in reputation, in cash, in physical conditions, and in property, if need be, that they may stand for honour, integrity, uprightness. In other words, we want heroism, which is only another way of saying self-sacrifice. We want them trained to consider the interest and well-being of others by their side. We want them trained to look beyond their own things and on the things of others. We want them trained, in other words, in the spirit of love that suffers long and is kind, that vaunteth not and is not puffed up, that beareth all things, that endureth all things, that suffereth all things.—*Lyman Abbott.*

The Carter Scholarships

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I WOULD like the medium of your journal to answer a number of communications received from High School teachers throughout Ontario, in reference to the bequest of the late Mr. Carter to the cause of secondary education, probably the largest bequest for this purpose that has ever been given in this province.

Mr. Carter died at Sarnia on November 2nd last. He was a native of Huron County, and a pioneer salt manufacturer. He founded the Empire Salt Co., of Sarnia, one of the largest and most prosperous in the country. Although not equipped with a higher education, Mr. Carter possessed a most logical mind and keen business acumen.

Some seven years ago, when he and I were spending an evening with a mutual friend, I happened to mention a letter I had just received from a former pupil asking if I could accommodate him with a small loan to enable him to complete his year at college. I made the statement that I had known many worthy students to whom the offer of a little financial aid would be almost invaluable, but unfortunately my means were limited. A few days later Mr. Carter, who was an intimate friend, sent for me and told me he had been thinking seriously over my remarks, about assisting worthy students. He stated that his income was much larger than his expenditure, and that he would like to do a little to help along that line if I would show him the best way to go about it. He did not want it looked upon as charity. After discussing the matter thoroughly he decided to offer three cash scholarships of $150, $100 and $50 for Sarnia Collegiate Institute for the senior examinations. The following year, on my advice, he changed these to county scholarships, thus allowing the other three High Schools in Lambton County to compete. He also decided to give an equal amount in Huron, Perth, Middlesex and Wellington. Mr. Carter was so pleased with the result of his experiment that he decided to make them perpetual. With this end in view he applied to the Legislature to pass a law authorising the Provincial Treasurer to receive legacies for this purpose, and to pay five per cent. interest on them. Mr. Carter, in his will that has just been probated, has left the sum of one hundred thousand dollars for this cause, the interest to be used in providing scholarships of $100, $60, $40, in each of the following twenty-five counties. These will be known as the J. I.

Carter scholarships. Although Mr. Carter was not much given to sentiment, I have more than once seen tears trickling down his cheeks as he read over to me some of the pathetic letters of thanks he had received from struggling students on receipt of his cheque. The counties to receive the benefit are: (1) Brant, (2) Bruce, (3) United Counties of Glengarry, Dundas and Stormont, (4) Elgin, (5) Essex, (6) Grey, (7) Haldimand, (8) Hastings, (9) Huron, (10) Kent, (11) Lambton, (12) Leeds, (13) Middlesex, (14) Lanark, (15) Ontario, (16) Oxford, (17) Perth, (18) Renfrew, (19) Simcoe, (20) Waterloo, (21) Wellington, (22) Welland, (23) Wentworth, (24) County of York, exclusive of Toronto, (25) City of Toronto (which, for the purpose of the will, is treated as if it constituted a separate county). The general principle followed in selecting the counties was to choose those having the largest High School attendance. It was Mr. Carter's ambition, however, to live long enough to provide for every county in the Province, but unfortunately it was not to be. The following are the conditions governing the scholarships:

First. The candidates who obtain the highest aggregate of marks on Upper School papers for entrance into Faculty of Education or Scholarship Matriculation in Arts into the University of Toronto or Honour Matriculation, shall be eligible for these scholarships: First, one hundred dollars; second, sixty dollars; third, forty dollars.

Second. No candidate shall be eligible for any of these scholarships who has not attended one of the High Schools or Collegiate Institutes in the county in which he is competing, for at least one year immediately previous to the examination; and no candidate who has been awarded one of these scholarships shall be eligible to compete at any subsequent examination.

Third. The winner of any other scholarship is not debarred from receiving a Carter scholarship.

The awards will be made by the Education Department, and the cheques forwarded by them.

The residue of Mr. Carter's estate, probably twenty-five thousand dollars, is left to the Toronto Hospital for Sick Children. In these two bequests Mr. Carter has erected a monument to his memory that will withstand the ravages of time. There have been wealthier men in this Province, and many whose names were better known, but J. I. Carter's name will be revered when most of these are forgotten.

Teacher—Willie, can you tell me what a trust company is?

Willie—Yes'um. It's a bunch of men surrounded by other people's money.

The Cadet System

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No. I. The Canadian Militia.

IN the century which has followed the close of the Napoleonic wars, there has turned, in all civilised communities, a great and growing tide of opinion against war and the study of war. The expression of this is found in the establishment of a Hague tribunal and, in education, in the recognition of the fact that history is not the study of campaign after campaign, but the story of the people's struggle for greater self-expression.

The arguments against war are two—the humanitarian and the economic. The former paints the horrors of war, the sufferings of the fighters and of their dependents; the latter, developed only during the last thirty years, points out the waste of the world's wealth both in the actual expenditure of munitions of war, and in the diversion of thousands of workers from productive channels, agriculture, trade, and manufacture.

These arguments, proving as they do that war is not only an evil to the victors and the vanquished, but an economic loss to the whole civilised world, are practically unanswerable. Their very logic, however, while convincing, has blinded some very well-meaning people to certain very obvious weaknesses in human character, and still more obvious facts in the history of the world in our own day: for, with a faith in the saneness and humanity of all the nations unjustified by recent

events, they assume that all will have the same reluctance to incur the evils of war as we ourselves. While they are stopping their ears and crying, "Le Roi est mort!" those who have them open may hear from China, from Eastern Europe, and from part of North America, the answer, "Vive le roi!" and war still holds sway. The Socratic belief that knowledge of evil consequences is in itself a sufficient influence to keep the passions in restraint has had some twenty centuries in which to justify itself; Christianity itself in nineteen centuries has been unable to check this evil. Arbitration after the manner of the civil courts has failed in almost every case, and because it lacks the very principle that makes the civil court effective—the power to enforce its decision upon the contestants. Cases in our police courts at home, atrocities in Peru and the Congo, unspeakable barbarities upon the plains of Thrace or in the mountains of Albania, prove that it is not yet safe for those with the higher wisdom and larger view of humanity to relax their vigilance even over those "who profess and call themselves Christians". China tried it; under the spell of Confucianism she folded her hands and "studied war no more", with the result that she fell a rich and helpless prey to each adventurer who cared to exploit her. After centuries of the trial of holding her own by peaceful means, she has been compelled to learn from her persecutors and fight them with their own weapons.

In the present unsettled state of the world the only way of preserving peace within one's borders is to be strong enough to make any attempt upon them cost the attacker too dear. The evil of militarism does not creep in until the State is accumulating power for offence rather than for defence. Germany is a military nation, but it has suffered no war for forty years or so, while Britain and the United States, neither of which will tolerate universal training, have seen more than one. Even to-day the two men who are most responsible for the foreign policy of the United States, than whom none were more opposed to war on any grounds, are hovering between loyalty to their one-time principles and their duty to civilisation in the preservation of order in Mexico.

In the methods of solving this problem of defence three systems demand our investigation. In Germany and other countries each man is compelled to train as a soldier for three years or less of his early manhood—a citizen army. In England, on the other hand, the citizen delegates his duties to the professional soldier, paying in taxes, a sort of "scutage" for exemption. This, however, is for the defence of the whole empire—the army may be ordered anywhere; for the defence of the island itself the country trusts to a volunteer citizen army, the Territorial Force, which cannot be ordered beyond its own borders. This still leaves a large number, who, while enjoying the blessings of peace, take no part in its maintenance.

In Canada there is a system which is a sort of half-hearted compromise between the two foregoing systems. The law compels every man between the ages of eighteen and forty-five to fight in defence of his country if it is attacked, but it does not compel any man to prepare himself for that service. Training is entirely voluntary.

A brief comment on the first two systems is perhaps in order before proceeding to examine the third. Germany is known as a military nation, yet it has had nearly half a century of unbroken peace. Indeed, if it were purely democratic, it might continue in that desirable state; for when each soldier is a citizen for whom the call to active service will mean leaving his means of livelihood, and will entail probably the suffering of those dependent upon him, he will avoid it until it is thrust upon him. It is only under an absolute monarchy that such an army could be a serious menace to any but its aggressors. The English system, however, is evil in principle, even if the innate good sense of the nation has avoided the evil in practice. Interests so vital that they demand bloodshed in their defence are too sacred to be delegated to others. A professional military class has not the same compunction about going to war; it is trained almost exclusively for war, and, like the recruits in Kipling's story, may even be instructed that its duty is to "pray for a war". Under a democratic government such as that of England this danger is negligible—the army is the instrument of the people—but a graver danger is that the people, paying this army to be ready to fight, may launch it into a struggle with far less compunction than they would go themselves.

The Canadian system has nothing to recommend it. Not only does it demand, in effect, that a vast mob of untrained troops shall be sent into action in case of an attack from without, but it even places a premium upon unpreparedness. To take advantage of the training provided for those who wish it, both officer and man must make considerable sacrifice; to the latter it means the loss of the difference between his wage and the pittance he receives at camp, and possibly the entire loss of employment; to the former it means in addition the expense of providing his own uniform and equipment, and making good any loss of stores or accoutrements in his command. Again the sum of money, about two dollars per head of population, necessary to finance the system is drawn from all alike, not alone from those who prefer to do their service by proxy.

Examining this volunteer army or militia itself, we will find that it is not what it appears to be. First, there is a very competent but rather inadequate instructional staff known as the Permanent Force, which exists almost entirely for the training of the active militia. Secondly, there is the active militia, each man of whom enlists for three years, and

swears to serve his country *within the borders of Canada only*. With the exception of a few city regiments whose social life helps to fill their ranks, it is becoming increasingly difficult to recruit the units even to peace strength, which is from one-half to one-third of war strength. Indeed, since the rule has been introduced against officers recruiting rural regiments for camp from among the unemployed of the cities, many regiments have disbanded, or are on the verge of disbanding. It is even more difficult to keep the men the three seasons, for although the law may be invoked to compel these men to fulfil their term of service, any such drastic measures would militate against recruiting. Camps of training last twelve days, only nine of which are occupied in actual work: this, even if repeated for three seasons, is a very inadequate training. City corps are in somewhat better condition, as their drills are usually in the evening, so that men do not need to neglect their employment in order to attend: for the most part, however, they lack field training.

The reasons for these conditions are:—

(1) The prosperous condition of the country, which makes it too great a sacrifice for men to attend camp themselves or to send their horses there.

(2) The loss to employers in allowing their men to attend, with the natural discrimination against those who attend against the employer's wishes.

(3) A general prejudice against the camps in their moral effects upon young men.

The remedy for the first two is not easy to find, but the prohibition of the sale of liquor in militia camps has gone far to remove the third, and to improve the quality of the work done. Officers would welcome provincial legislation which would support the Minister of Militia in his efforts to make the annual camps places for hard, sober work: for example, the entire prohibition, within a certian radius, of the sale of liquor during the time of annual training.

Now, with the defence of the country in such an unsatisfactory state, shall the German or the English system be adopted? Conscription, or a standing army? The country will tolerate neither. The answer comes from the schools. Cadet corps are increasing in number and in strength at the rate of one thousand cadets per month. The hope of Canada in future years lies there.

In a subsequent article some hints will be given regarding the formation of a cadet corps.

NOTE:—An excellent pamphlet entitled "The Cadet System in Schools" has been published, and is obtainable free from the Secretary of the Strathcona Trust in each province. It is written entirely by civilians prominent in educational and religious circles, and sets forth the values of cadet training in a convincing manner.

Summer Schools in France and Germany

THE best preparation that a teacher of modern languages could receive for his future work, after having completed his course at the University, is to spend at least six months in France and six months in Germany, speaking the language and living the life of the people. For many reasons this desirable training can be obtained by very few, but a course at one of the numerous summer schools in France and Germany will be found extremely beneficial, especially if the teacher goes with the distinct purpose of using his time to the best effect. To do so, he must live with the French family and speak much with them, insisting on having his pronunciation corrected; should studiously keep away from everything English; attend lectures and theatres; read the newspapers and magazines, and in every possible way try to acquire something of the French language as it is used in the life of every day.

The cost of spending two months in France is not nearly so great as one is apt to imagine, provided that you are modest in regard to your ideas of comfort and of spending. From his own experience and that of others, the writer is sure that it is possible, out of $300, to pay the expenses of the journey, remain at least six weeks in the country, leave no bad debts behind you, and return with sufficient money to readmit you to your own country.

For the benefit of those teachers who may wish to avail themselves of one of these summer courses in France or Germany, the following information has been collected, and is given in as condensed a form as possible.

The Teachers' Guild of Great Britain and Ireland, whose offices are at 74 Gower St., London, W.C., arrange annually for three holiday courses at Honfleur in France, at Lübeck in Germany, and at Santander in Spain. These courses all begin during the first week in August and last three weeks, announcement of the exact dates being given in a handbook which is issued in March, and will be forwarded for sixpence on application to the address given above. The courses include lectures, classes in conversation, phonetics, reading, dictation and composition. The handbook contains full information in regard to lodgings, books to be studied, examinations and diplomas. The cost of living is estimated to be: at Honfleur, about $60; at Lübeck, about $55; and at Santander, about $80. These courses are very highly recommended.

A longer course is given in Paris under the auspices of the Guilde Internationale, whose offices are at 6 Rue de la Sorbonne. It is divided into three periods—July, August and September. A small book is issued containing full information in regard to the sort of work that is undertaken. Here one is in the very centre of the scenes which are so often the themes of the lecturers. This course has been highly commended by several Ontario teachers, on account of the individual attention which is given to the students, one advantage that is not possible in the course of the Alliance Française—also held in Paris—owing to the larger numbers who attend this latter course.

The Scottish Education Department, Whitehall, London, S.W., also issue, for the benefit of Scottish teachers, a table of holiday courses, which you will receive on application. With the canny spirit characteristic of the race, they decline to vouch for the efficiency of the instruction given. The little book contains, however, a great deal of most useful information.

The English Board of Education also publish a list of holiday courses, which can be obtained from Messrs. Eyre and Spottiswoode, Government printers, for the sum of twopence. From among the number the following are chosen on account of the high reputation they seem to enjoy among teachers who have attended them. The courses at St. Malo–St. Servan (Brittany), conducted in connection with the University of Rennes, are three in number: the Cours Élémentaire, Cours Intermédiaire, and Cours Supérieur for beginners, teachers of French, and students of literature. The location is a charming one on the seashore of the picturesque land of Brittany, and within easy access of many other places of interest, such as Dinan, Cancale, Dinard, Paramé, Mont St. Michel, etc. The course which is given in the month of August is an excellent one, and largely attended. Including instruction, the cost would be $65 or $70. The secretary is M. F. Gohin, 12 Avenue Trudaine, Paris.

At Lisieux a course which is under the patronage of the Alliance Française is held in July and August. Special rates are given from Southampton to Havre, and from Havre to Lisieux. The cost of the instruction is 50 francs, and the cost of *pension* per day is from 5 francs a day upward. The secretary of the course is M. Féquet, 12 Rue de Rouen, Lisieux, France. The work undertaken is similar to that of other schools, but the conversation circles consist of groups of seven persons each, an arrangement which is said to work out exceedingly well. Excursions and social evenings are also a special feature of this course.

The course at Rouen is held also in July and August. The fees vary according to the time that the student wishes to attend, from 15 francs

a week to 100 francs for the two months. Passage from England is by way of New Haven and Dieppe. For complete information you should write to M. Duperon, 30 Rue de Reims, Rouen. This course has been most highly commended as one which is admirably conducted, and has, as one of its most interesting features, an historical study of the ancient architecture for which the city is so celebrated. The cost of living, as in the case of the places already mentioned, is from 6 francs a day upward.

At Dijon special arrangements are made for ladies, who are accommodated at the Maison d'Accueil at the modest charge of 60 francs a month. Four hours of instruction are given per day, and visits planned to the many points of interest of a city that is especially rich in artistic and historic curiosities. Address "Le Comité de Patronage des Étudiants Étrangers," Dijon, France.

At Nancy the holiday courses are held from July to November, at the small fee of 40 francs for the first six weeks, and 10 francs for each subsequent month. A special inducement which they advertise is a Professor of Phonetics and a laboratory with phonograph for practical instruction. The secretary is M. Laurent, à l'Université de Nancy.

A course is held at Boulogne-sur-Mer, from August 1st to 31st, under the auspices of the University of Lille and the Alliance Française, which is specially planned to meet the needs of English teachers. For those who prefer to spend the holidays at the seaside, there is no more charming spot to be found in France. Those who wish full information are asked to write to M. Mis, 145, Boulevard Victor Hugo, Lille.

The Alliance Française provides a special course at Paris during the months of July and August. For the sum of 55 francs one may attend for one month, and for 100 francs for the two months. Address M. le Secrétaire de l'Alliance Française, 186, Boulevard St. Germain.

Courses are also held at the following places in France: Besançon, Grenoble, Versailles, Bayeux, Granville-sur-Mer, and Caen; in Switzerland, at Geneva, Lausanne and Neuchâtel; and in Germany, at Marburg, Baden, Kaiserslautern and Jena.

Any further information in our possession will be gladly furnished on application to THE SCHOOL.

W. C. F.

"The horse and the cow is in the field," read the teacher. "Mary, what is wrong with that sentence?"

Mary was evidently more versed in rules of politeness than the rules of grammar, for she answered promptly:

"The lady should be mentioned first."—*Youth's Companion.*

Entrance Spelling

W. F. MOORE
Principal, Public School, Dundas

AT the County Convention of the Wentworth Teachers the following resolution was unanimously adopted: Moved by W. F. Moore, Principal of Dundas Public School, seconded by A. Pearson, B.A., Principal of Dundas High School: "That whereas spelling is a gift, many have great difficulty in acquiring, and some completely fail to acquire;

"That whereas many pupils, otherwise well qualified, fail to pass the spelling examination and are therefore debarred from entering the High School;

"We therefore respectfully request that the Department of Education deduct one mark only for each misspelt word on the dictation paper, and that if the candidate pass successfully on the other subjects of the examination, he be not plucked should he fail in spelling."

Any experienced teacher knows that some pupils cannot be good spellers. A spelling lesson may be taught, and studied faithfully, but a few weeks afterwards some pupils find that neither by eye nor ear can they determine whether it is *ie*, or *ei*, *eed* or *ede*, or *ise*, or *ze*.

Many pupils are deficient in music, in drawing, particularly in colour work. This deficiency may be regretted but is never considered a bar to a High School or Collegiate Course. Is correct spelling important? Certainly, but not essential. And poor spelling should not take from any pupil the opportunity of going on for a better education.

It is quite possible that more Entrance candidates fail in spelling than in any other subject. The Departmental Regulation says that on the "dictation paper two marks shall be deducted for each misspelt word -and reasonable deductions made on all other papers for misspelt words". Under this regulation an inability to spell penalises a pupil in his answers in grammar, geography, literature, composition and arithmetic. Several times I have made an analysis of the number of pupils who have failed in the various subjects of the Entrance examination. In 1909, 391 pupils from the County of Wentworth wrote on the Entrance examination. Of these 148 failed to get 60% on the dictation paper, and 156 failed to get 60% on the arithmetic paper—substantially the same in each subject; but when we consider that marks are deducted for spelling in the other subjects, failures due to spelling were probably more than in any other subject.

The amount of time spent on spelling in Ontario Public Schools is out of proportion to its value. Our schools give it not less than twenty minutes daily, in addition to the time given to it indirectly in connection with all other subjects on the programme. Surely this time might be more profitably spent. Those who support the present scheme will say that the fault lies in the lack of method. Not so, or the complaint would not be so general. Teachers assemble from all over the province at the annual meeting of the O.E.A., and several times the O.E.A. has unanimously adopted the principle of the resolution.

Time is wasted upon it in other countries. On September 15th, at a meeting of the British Association for the Advancement of Science, Sir William Ramsay, speaking of spelling said: "It causes a waste of time, and is immoral." Sir Oliver Lodge said at the same meeting, "Spelling seemed to be a matter of Providence, either one can or cannot spell." His advice was that children "should not be worried too much about spelling." Let no pupils be deprived of a Collegiate or University education because they have not the gift of being able to spell correctly.

[At the request of some of our subscribers who state that it is difficult for teachers to obtain copies of examination papers in spelling, we publish the following.]

Junior High School Entrance.

SPELLING.

A.

An uneducated person may know, by memory, many languages, and speak all of them, and yet truly not know a word of any, not a word even of his own. An ordinarily clever and sensible seaman will be able to make his way ashore at most ports; yet he has only to speak a sentence of any language to be known for an illiterate person; so also the accent or turn of expression of a single phrase will at once mark a scholar. And this is so strongly felt, so conclusively admitted, by educated persons that a false accent or a mistaken syllable is enough, in the parliament of any civilised nation, to assign a man to a certain degree of inferior standing forever.

B.

1. The two armies fought a fierce engagement before the decisive battle took place.
2. To beguile the time, during the tedious wait, the young emigrant sang several delightful ballads.
3. The police were given explicit orders to clear the streets.

4. The honey bee stores its winter's hoard in cunningly constructed cells.
5. The strikers knew that their demands could not be acceded to.
6. The general gave instructions to harass the enemy.
7. The sword is the symbol of war, as the sceptre is of kingly power.
8. Modern etiquette demands civility as one of the conditions of social life.
9. The lawyer assured me the clause would be inserted.
10. The bereaved husband received the news with fortitude.

Junior High School Entrance.

SPELLING.

A.

The window was placed over the principal entrance to the royal apartments, and commanded a view of the internal quadrangle of the convent, formed on the right hand by the length of the magnificent church, on the left, by a building containing the range of cellars with other necessary apartments rising above them, while a fourth row of buildings, showing a noble outward front to the rising sun, consisted of large quarters for the reception of strangers and pilgrims, and many subordinate offices, warehouses, and places of accommodation for the ample stores which supplied the generous hospitality of the reverend fathers. A lofty vaulted entrance led through this eastern front into the courtyard, and was precisely opposite to the window at which the friar stood, so that he could see underneath the dark arch, and observe the light which gleamed beneath it from the eastern and open portal.

B.

1. The business of the village is managed by a council composed of a reeve and four councillors.
2. Of course, the deficit cannot be fairly charged against the finance committee of this year.
3. The counsel for the railway denied any responsibility for the accident.
4. The grocer weighed the sugar and currants on a false balance.
5. The diamond is eagerly sought after for personal adornment.
6. The sunlight glistened upon their polished metal helmets.
7. It is an accepted principle of English law that the accused must have the full benefit of any reasonable doubt.
8. The darkest hour is that which just precedes the dawn.
9. The young student was eligible to compete for the scholarship in science.
10. Great cargoes of dairy produce are sent by way of Montreal.

From the Teacher's Note-Book

MARGARET D. MOFFATT
Bolton Avenue School, Toronto

WHAT a highly-favoured person a school-teacher is! There is no other creature in the universe so be-flowered and be-fruited unless it is Mother Nature herself. Amy has been overloading me for over a week with Golden Russets. Fearing Pomona's jealousy, I asked, "Amy, why this extravagance? That barrel of russets will soon be empty and your father will be sending me a bill for helping to dispose of them." "Oh", cried she, gleefully, "I want to get down to the Snows. There are Snows at the bottom!" Then I recalled the words of the wise man, "Vanity of Vanities!" Nevertheless those Golden Russets were good and I think I see Snows ahead, for me.

The Irrepressible had been astonishingly good for three days. Her mother promised her something if her conduct should be marked "good" on her report. The Irrepressible forgot what it was that her mother promised but it was evidently worth being good for. "If I do conduct like this", she inquired, "till the end of the month, will I get 'excellent'? . . . . But she has lapsed. To-day she wanted a favour. "No", she was told, "not till you are a better girl." "Ain't I good enough yet?" "No." "Well, how much better do I have to be?" There is no impertinence about any of this. It is the frank language of a thorough and very likable child. "The ghost truly is ready but the meat is feeble." (Free translation from the German.)

The Hempie comes from Nairn, Scotland. She has blue eyes and rosy cheeks. She looks like a calf of Highland cattle, with black "towsily" hair and always a few stray locks down over the eyes. She wears a dark-green home-knit sweater which, I suppose, is washed out on Saturdays unless perhaps it is a wet Saturday, when it quite conveniently waits till the next. She is very self-conscious and not a little conceited. She has no trouble remembering anything. When she stands to answer she leans against the desk and smiles an impish smile. She frequently gets into trouble in the yard and I find her against the fence, after the lines have gone in, with her wool-cap down over one eye and her wool-muffler tied over the cap in a rakish manner. She is there because somebody has "pooshed" her—not because of any offence committed by herself. Her eyes then have half a twinkle and half a grievance in them.

The Hempie is a sort of Mordecai, for she "bows not" to me in the morning. The boys salute; the girls curtsey, in all attitudes of deference, but the Hempie stands stiff and straight. She says "Good-morning", but it is not in her eye nor in her manner. One day she was kneeling on her seat rattling off the Multiplication Table. (It always makes an awkward pause in a lesson when I take time to persuade the Hempie to stand on her feet in the centre of the aisle.) "Hempie," I asked, "can you repeat your Shorter Catechism as fast as that?" "We had it to learn in Scotland," replied she, but looked as if she did not care for further examination. So I went on testing the class in the Multiplication Table. I'm proud of her improvement in writing. In a very few weeks she changed from cramped finger-movement to an easy muscular movement with excellent results. It must have been the Scotch in her which helped to do it.

As Fred passed me to-day going to his line at recess he complained with a twinkle in his eyes and a pout on his lips, "I left a wad o' gum sitten on my desk, I was saven it up for a chew at recess an' someone has swiped it on me."

Miss Topsy Turvey is nine. She signs her name on all her books and papers "Miss Topsy Turvey". Last term she was a hopeless case. The only way to keep her from adding by counting on her fingers was to seat her at the front and hold her right hand. She is left-handed. She spent most of her time yawning. She was asked, "What time did you go to bed last night?" "I played cards with mama till eleven." The best thing and the only thing to do was to let her yawn. It was no use speaking to the mother. "She often goes off to school in the morning and I never see her till after ten at night. I don't know where she gets anything to eat." Thus in a whining, drawling voice Miss Topsy's mother answered her teacher's inquiries two years ago. "She'll go down dark streets at night where I'd never think of going." But Miss Topsy

Turvey has a will of her own if her mother hasn't and this term it is serving her well. She has taken a notion to learn, and learn she can. She is making herself go to bed early. She is making herself behave. When she looks as if it were getting difficult she is handed the pointer, stands on the blackboard box and drills the class in Spelling, or, gives commands for Strathcona exercises. The class like Miss Topsy Turvey. At recess I find her in a corner of the yard with a class of her own. She smuggles an old umbrella handle in and out of her line, for she gives a singing lesson in the yard and needs it to beat time. She also uses it for discipline.

To start a language lesson one day I said: "Think of a sentence beginning with, 'I wish I had'." This was to discover to what extent "wished" is used for "wish", to be followed by practice of the correct word. A number of the sentences are afterwards placed on the board and read aloud from it. This is a lesson to be repeated periodically. Child after child stood and gave his or her sentence: "I wish I had a pony," "I wish I had a dog," "I wish I had a bicycle," "I wish I had an Eaton Beauty doll," "I wish I had a watch." When it came to Miss Topsy Turvey's turn she made everybody gasp at her announcement — "I wish I had a fellow." The second time this lesson is taken the pupils listen to count the number they hear repeating the error. They may tell how many they heard but not who made the mistake until all are on the alert to avoid it.

Book Review

Elements of French Pronunciation and Diction, by Benjamin Dumville, B.A. Cloth, 250 pages. Revised 1912. J. M. Dent & Sons, London and Toronto. 75c. The importance of the study of phonetics for the teacher and for the serious student of modern languages is now universally recognised. The author, who is regarded as an authority, has produced, in consultation with Passy, Rippmann and others, a work of great practical value. The formation of the sounds of speech is explained in a clear, scholarly fashion, illustrated by ingenious diagrams which show the position of the organs of speech. The alphabet of the International Phonetic Association, used so widely in England and on the continent, is employed to represent the sounds. Accent, intonation and liaison are the subjects of specially careful consideration. The theory is emphasised by an excellent series of exercises on the various French sounds and by extracts for practice in reading. The teacher of French will find this book of great value in teaching his pupils and possibly himself to pronounce more correctly. W. C. F.

Main Building, Rittenhouse School.

The Rittenhouse School

F. J. NEWHOUSE
Rittenhouse School, Vineland Station

THIS school is situated at Vineland Station, Lincoln County, Ontario. It is a country school with two teachers. The ratepayers of the section are all engaged in farming, fruit being the principal product. But in the midst of a very busy life they realise that no investment pays quite so well as money and time invested in the improvements of their school.

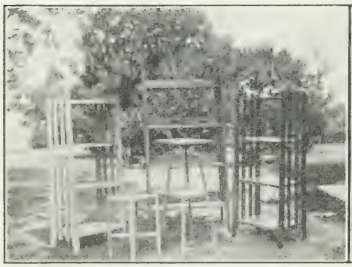
The ratepayers have been enabled to accomplish their purpose in the school largely by the generous help of Mr. M. F. Rittenhouse, of Chicago. Mr. Rittenhouse, who spent his boyhood days in this section, went to Chicago when a young man and by his ability and energy amassed a large fortune. He did not forget his old home, and some years ago conceived the idea of making the school which now bears his name a model country school. To this end he has spent, and is still spending, much money and time to show that a school may be made the most beautiful and attractive spot in a section.

There are two school buildings. The main school is made of brick over which ivy has grown until it almost covers it. In this building are

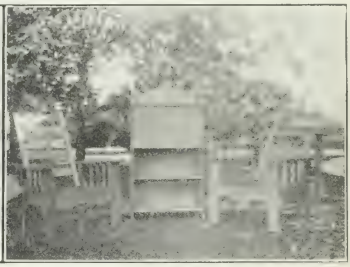
three rooms and a basement. The senior class occupies the largest room. The other rooms are used as a library and a museum. The library, which is valued at over two thousand dollars, contains a collection of the best books that can be secured, including the best works of reference. This year also we receive over twenty magazines of all descriptions calculated to instruct and entertain. This library is open for the use of the entire community every day in the year.

Another view of flower section.

The museum, which occupies the third room, is made up of articles loaned by people of the section and is in itself an education. Any school could have a museum if the room were provided. There are curios and mounts enough in every school section to fill a small room, and thus the history of the section would be preserved.



Work done by Intermediate boys this year



Work done by Senior boys this year.

In the basement a part is partitioned off for a manual training room, where the boys make anything from garden-stakes to morris chairs and never seem to tire of the work.

The second school building, which was erected one year ago, is a combination of primary room and teacher's residence. It is built with a view to being entirely converted into a teacher's residence at some later date.

Connected with the school is a caretaker's residence and a large concert hall in which a series of entertainments is carried on throughout the year, and which is also used for any public meetings of general interest.

The grounds of the school, which are two acres in extent, are very beautiful. In the front are beds of geraniums, cannas, begonias, etc. On the sides are all sorts of flowering shrubs and ornamental shrubs and trees. In the rear of the school is the playground. This is used not only by the school children, but any one with a game to play goes there.

Across the road and connected with the concert hall is a picnic park of four acres. Here are sheds and stables for horses, tables for picknicking; a band-stand for concerts and a house where refreshments and hot water can be obtained. Here is found every convenience for making the school a social centre. Here the young people of the neighbourhood

Teachers' Residence and Primary Room.

entertain each other. Here the Farmers' Institute holds its annual gathering and here the Athletic Clubs hold their Victoria Day sports.

The garden consists of an acre, one-third of which is devoted to flower culture, one-third to vegetable culture and the remainder to raising fruits and propagating trees and shrubs. Each of these departments is kept by itself. The flowers are grown in the front, the vegetables next and the fruits in the rear. Besides a perennial border fifty annuals were grown this year. In the propagating plots are found cuttings of many of our flowering shrubs, which are to be distributed among the children next year.

Connected with the garden work is a greenhouse where are raised geranium cuttings and other tender flowers. From the greenhouse is

drawn a constant supply of flowers through the winter. In spring annuals are planted in flats and the children get lessons in transplanting.

Besides the school garden there is a garden for the teachers' private use.

The ordinary school work is the same as that of any other school which takes up public school subjects from forms I–V, and that work does not seem to suffer from the introduction of these other studies, as the students have been quite successful in the Entrance and Fifth Class examinations.

All schools cannot be equipped like the Rittenhouse School, but there are many schools in this province which have without any private assistance taken inspiration from the Rittenhouse School, and in some instances have on a smaller scale rivalled it in beautifying their grounds and buildings.

Caretaker's Residence and Concert Hall.

Flower Garden.

Date of Birth.—A Hebrew mother led her little boy into the principal's office. The boy looked suspiciously young.

"What is the date of his birthday?" asked the principal, before the entered the name in his book.

The mother returned a blank stare.

"What is the day, month and year of his birth?"

"Don't know what you mean."

"When was he born?"

The light of intelligence flashed in the mother's face. She answered in positive tones,

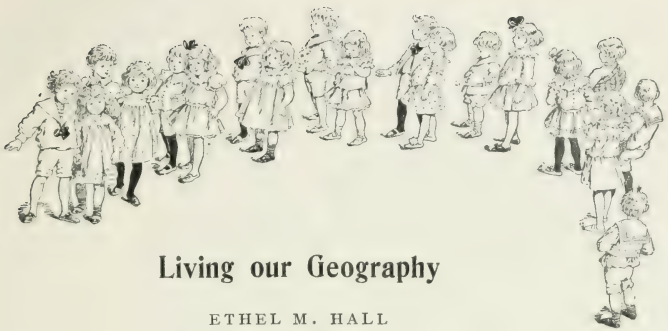
"One o'clock at night."—*Happened in a Montreal School.*

Teacher—Well, Tommy, can you tell me the meaning of "repent"?

Tommy—I don't know, sir.

Teacher—Well, suppose I stole a purse and I got locked up, wouldn't I repent?

Tommy—No, sir; you'd be sorry they caught you.—*Ex.*



Living our Geography

ETHEL M. HALL
Public School, Weston

A CLOUDY afternoon in late autumn, the manual lesson finished, sixty pupils waiting expectantly for the next lesson, how shall it be developed? The shadows are beginning to creep into the room. It is too dull to use the blackboard. The teacher glances through the windows at the leaden sky and back again into the faces of the children in the fast darkening room, and repeats slowly:

"The day is done, and the darkness
Falls from the wings of night,
As a feather is wafted downward,
From an eagle in its flight.

"The night shall be filled with music,
And the cares that infest the day
Shall fold their tents like the Arabs,
And as silently steal away."

She pauses for a moment, allowing the beautiful language of the poem to sink into the minds and hearts of the pupils. Then she asks quietly: "I wonder why the Arabs live in tents?" "Because they have no wood to build houses," said a little boy. "Yes, that must be one reason," replied the teacher; "but why is there no wood?" "There is no lumber, because the country in which the Arab lives has very few trees," answered a little girl. "But why do not the trees grow there, Bessie?" "It is too hot for them," said Bessie. "I have a book which tells about the Arabs," said Annie. "Can you tell us what it says, Annie?" "The country where the Arab lives is called Arabia, and it is a very hot land. Nothing will grow there because the sun is very hot and the land is

covered with deep sand," said Annie. "The Arab pitches his tent under some palm trees, beside a little spring of water. Here and there in this sandy country, at great distances, are little green spots called oases. The dates upon the palm trees he uses for food for himself, and also for the camel if other food is scarce. This great tract of hot, sandy land is called a desert," said the teacher.

"Do you remember that the poet said, 'Shall *fold* their tents like the Arabs, and as *silently steal* away?' Longfellow knew all about the habits of the Arab. Some night, when the dates are all eaten and the water in the spring is getting low, this desert wanderer silently folds his tent, places it upon the back of his faithful camel and rides away over the trackless sands, the padded feet of his 'Ship of the Desert' making no noise as it swings along through the long cool night journey. Have you found another reason why the Arabs live in tents?" "I think I know," said Francis. "If the Arab lived in a wooden or brick house he could not fold it upon his camel's back and move away." "Yes", said the teacher, "he finds his black tent much more convenient, and as he uses very little furniture he can pack up in a very short time."

Pleasantly teacher and pupils talk about the life of the little Arabian boys and girls, of their schools, their games and their pets.

The gong sounds, and the children playing, they are Arabs, fold their wraps about them and pass silently out into the winter twilight.

The next day the children are ready to study the life and habits of the camel, which the Arabs call "The Gift of Heaven". They tell all they have been able to learn about it, and the teacher supplements when necessary.

Still another day is taken up with the study of the "Ostrich". The Arab's love for his horse is also made a subject for conversation. But Arabian life becomes very real when the children begin to dramatise. Little lame Tommy, who can take no part in the marches, can play that he is an Arab chief travelling upon his camel (desk) over the burning sands. Suddenly he sees a cloud of dust in the distance. He throws himself flat upon his face in the sand (floor), while the terrible sand-storm whirls past. At last the storm (a little girl acting the wind) departs. He rises slowly, shakes himself and looks around for his camel, half-buried in the drift. Then he searches for his skin water-bottle, without which he knows he will perish. He remounts and resumes his journey. But his camel has smelt water in the distance, and away he swings over the sands to where he knows he will find rest and food among the black tents of some friendly tribe.

Now commences the practical work. The sand-table is made to represent a "desert waste". The pupils model camels, ostriches and Arabs. They build the black tents of coated paper. They cut palm trees and plant them near the tents.

All the time the lessons have been growing on the blackboard as well as on the sand-table. At the right moment the story of the three wise kings is told. Three star-gazers travelling over the desert sands notice one star more brilliant than the others. It interests them. It lures them on. They follow it on and ever onward till they reach the edge of the desert. They encounter a company of shepherds who are talking excitedly about a vision of angels and a glorious heavenly song. The children memorise:

"Three Kings came riding from far away,
Three wise men out of the east were they,
And they travelled by night, and they slept by day,
For their guide was a beautiful, wonderful star."

The Arabian kings join the shepherds in their quest for the star-heralded child. They reach the little town of Bethlehem upon the olive-crowned hill.

So the life in Arabia gradually develops into the Christmas story. The golden star is placed over the sand-table with the rays reaching far over Bethlehem to the black tents in the lonely desert. The flat houses of the "Little Town" are made in the construction period.

In play, story and song the children live in the East for one month. If the work is to be of value to the child, the teacher must live all these experiences with the children and not suppress their spontaneity. Happy the teacher who has had the privilege of Eastern travel, but this being denied, she must read *widely*, watching constantly for articles and pictures, which will aid her in the work. A primary teacher can make her current reading count in the schoolroom, and she grows in her own general culture and sympathy with the world's workers by teaching Geography as "*Life Experiences*".

Little Journeys to Rural Schools

F. H. SPINNEY
Principal, Alexandra Public School, Montreal

VI.

IT was "Letter Writing Day" in the Hampton school. The teacher informed me that each alternate Friday afternoon was devoted to letter writing and letter reading. These exercises had been carried on for nearly a year, the children having received letters from many different countries. Thus, before the writing began, the teacher and older pupils read a few of the most interesting letters received during the past fortnight.

On the board were some suggestions to help those pupils who "cannot think of anything to say". There were very few such pupils in the Hampton school, but the teacher always supplied some suggestions. They were as follows:

Name some of the places to which you have already written, and some of the places from which you have received answers. Tell something about the most interesting letter that you have received. Then tell about your school; your home; your games; the books you

like best; what you do in the morning, evening, over Saturday and Sunday; your last holidays; the circus that was here; the last election; etc.

The pupils wrote the letters carefully in their work-books. The teacher moved about among them observing the progress of their work. Then she went to the board, saying she had observed the misspelling of certain words. These words she wrote on the board. Some of them were: *written, several, received, grammar, barley, forty*, etc.

The teacher gave some suggestions regarding the dividing of the letter into paragraphs, and then the pupils rewrote the letters, using paper that the teacher had brought to school for that purpose. I was permitted to make a copy of the best letter:

HAMPTON,
May 2nd, 19...

Dear Philip,

The teacher gave your letter to me to answer. She read all the letters from your school to the class. Some of them made us laugh.

We have written to eight different places, and have received letters from six places. I have received only two answers to my letter, but some of the boys have received five letters. My best letter was from India. The boy was a Hindoo boy, and he did not know English very well, so his letter was quite funny.

I live on a big farm. My father keeps two hired men in the summer. We have eight cows, three horses and a colt, and lots of hens. Some days I get twenty eggs.

On Saturday I help my father trim the orchard or do other work, but in the afternoon I generally play. Last Saturday my chum and I went fishing, and caught two eels and seven trout. He caught two and I caught five.

In the evening we play dominoes. Do you ever play that game? I think it is great fun.

I read a great many books. I like Tom Sawyer the best, but I like Henty Books very much. What books do you like best?

Be sure to write soon, and tell me all about your country.

Your unseen friend,
HAROLD BENTLEY.

I asked the teacher, "Do the pupils ever get tired of writing letters?"

"No," she replied, "they seem to enjoy it more every time they write."

"Do you always mail all the letters?"

"Sometimes the children mail their own separately; that is, when they know the individual addresses. When I mail them in one package, I usually send the best letters."

"How old are the youngest children who take part?"

"Well, George (here in the front seat) is only eight years old, and you see he has written quite a nice letter. Of course, I give the youngest children the most help. At first, I wrote a letter on the board in language that a child would use, and asked the youngest children to read it aloud, and then to copy it."

"Do you always write the misspelled words on the board?"

"Yes, sometimes at the beginning of the lesson I write a few of the words that were misspelled on the last letter writing day. The oldest pupils have dictionaries."

"Do you always know the name of the teacher in the distant school?"

"No, I addressed some letters to the Superintendent of Schools, Brisbane, Australia, although I had no idea who he was. He sent the letters in two or three packages to village schools, and we received some very interesting letters in reply."

"When a child gets a letter from one place, does he keep up the correspondence with the writer?"

"Yes, many of the children write letters at home, keeping up the individual correspondence. Some exchange stamps in this way, others exchange postal cards. One father told me that he thought it the best school exercise he ever saw. He said that his two boys took a great interest, and were always looking up the places in their geography."

Any subject that may be chosen for a composition exercise can be utilised for a portion of a letter. The composition will then have a double value, and will be written with far more interest and pleasure on the part of the pupils. It would be very difficult for an orator to make an effective speech to empty benches, so it is very difficult for children to write letters that are to find a resting place in the teacher's waste basket.

Self-expression is one of the leading joys of life. *Repression* has been the key-note of school life for many years, but there are now signs of improvement in this respect. School life is thus becoming more enjoyable. If we can keep children active in a healthful manner, they will be happy and "GOOD". When they are used as passive recipients for canned knowledge, they grow "inattentive" and "BAD".

If readers of THE SCHOOL wish to add interest and pleasure to composition work, I advise them to take up such exercises in the form of REAL LETTERS to be sent to REAL LIVE BOYS AND GIRLS in distant countries.

From a Composition Paper: "The people who lived on the earth before it was inhabited were a very low order of savages."—"A penitent is one who earns his living by his pen.".

Canadian Artists Series

II.

"I have two patronsaints, Michael Angelo and Turner." — *Horatio Walker.*

At the Canadian National Exhibition last summer, "Milking Time", by Horatio Walker, every day drew admiring crowds. From the wondrous lighted sky hovers an atmosphere of peace over pasture-lands

"Where the quiet-coloured end of evening smiles,
Miles on miles."

In the foreground two fine reclining cows contentedly chew the cud, while near the orchard fence Jacques and Marie attend to the milking of the rest. The whole composition proclaims the master draughtsman and colorist. "Who is the artist?" "Where does he live?" "What else has he painted?" were questions often asked and seldom satisfactorily answered. This series of articles is being written to put teachers in possession of the necessary facts that their pupils may not ask in vain the same questions about our famous Canadian artists.

Horatio Walker is a quiet man who shrinks from speaking of himself or his works. This much is known. He was born at Listowel, Ontario, in 1858. Upon a visit to Toronto when he was fourteen, he saw for the first time an oil painting but was disappointed in it. From early childhood he had been fond of making sketches from nature. His art was developed along his own methods of expression. It is the product of no school or academy but of his own untiring genius. While still a boy his family moved to New York State where he resided for some years. Later Mr. Walker made his home at Ste. Pétronille, Ile d'Orléans, Quebec. Here he still resides, the beloved friend of his French-Canadian neighbours.

These simple folk with their quaint dress and houses, their primitive implements of toil, their cattle and domestic animals have provided Mr. Walker with subjects for most of his works. Like Millet he has succeeded in placing the figure in the landscape so that each is the complement of the other. His peasant bears an harmonious relationship to the soil upon which he toils. Millet's art is often depressing because he sees only the tragic side of labour, "Of sinful man the *sad* inheritance". But there is no sadness about Walker's *habitants*. His artistic handling brings out the beauty in the routine of their lives. The following words of the American art critic, Chas. H. Caffin, gives an excellent summary of Walker's aim: "While there is no doubt, I think, that he is

primarily interested in art as an expression of life . . . the feeling for beauty in the abstract is never absent from his thoughts."

Horatio Walker at work.

The frontispiece of this number, "Turning the Harrow", reproduced by the courtesy of N. E. Montross, New York, is a good illustration of Walker's art. The industrious Pierre and his heavy-footed, shaggy-

maned French pony are at work betimes. The dawn is driving from the distant sky the mists of morn. The early beams have already lighted a far-away hillside and high-lights begin to appear upon man and horse and harrow. Meanwhile the home-made harrow must be righted as the horse turns to retrace the length of the ploughed field. The conception is simple, natural and harmonious, satisfying to the layman who enjoys the story it tells, and to the artist who approves the manner of telling it.

From 1883, when Mr. Walker's work first met with public approval, until the present, his fame has been growing. Hartmann in his History of American Art concedes him first place among American animal painters. Moreover, he says: "'The Harrower', 'The Tree Fellers', 'Hauling the Log', 'A Spring Morning', can challenge comparison with any modern European cattle and landscape paintings." Mr. Walker has been admitted to membership in well-known Art Societies of Canada, the United States, England and France. He enjoys the distinction of being president of the Canadian Art Club. He has won numerous gold medals and prizes at the various expositions where his paintings have been exhibited. His works hold honoured places on the walls of such notable institutions as the National Gallery of Art, Washington, the National Art Gallery of Canada, Ottawa, and the Metropolitan Museum of Art, New York.

Other paintings which show the range and character of his art are: "Shepherd and Sheep", "Girl Feeding Turkeys", "Sheep Washing", "The Wood Cutters", "Boy Feeding Pigs", "The Ice Cutters", "A Summer Pastoral (a girl watching her sheep)", "The Felled Tree", "Returning from the Fields", "Sheep Shearers". Prints of these may be purchased from Mr. N. E. Montross, of New York. What better application can be made of funds appropriated for picture study and for schoolroom decoration than in the purchase of prints or better still of the originals of our own artists who celebrate the romance of our native land?

S.W.P.

Mutual Joy.—"Were you glad to get back to school and see your dear teacher?"

"Well," replied the observant boy, "I guess I was just about as glad as dear teacher was to get back and see me."—*Washington Star.*

Teacher (reading aloud)—The weary sentinel leaned on his gun and stole a few moments' sleep.

Dot—I bet I know where he stole it from.

Teacher—Where, Dot?

Dot—From his knapsack.—*American Education.*

Teaching Agriculture in Ontario Schools

Contributed by the Director of Elementary Agricultural Education

FOR the past five years the Schools' Division of the Experimental Union has been furnishing Ontario schools with planting material for gardening work. In 1913 about 400 schools received such material. The reports on their work show that all over the province teachers are finding the work of school gardening worth while. Mr. Matthews, teacher in S.S. No. 20 Enniskillen Tp., Lambton Co., reports on his work as below. The picture suggests an excellent plan for laying out the grounds in the front of a country school. Such a school must be a local beauty spot.

"Our garden is a gradual development and has already far outgrown our earliest plans. When our new schoolhouse was built in 1912 the ground in front was left 'in the rough'. The boys and I decided to dig it over, level it, and perhaps put in a couple of flower plots.

"The trustees saw what we were doing, and decided to put in cement walks; they also drew earth for better grading and several loads of good earth for our flower plots, at a total cost of about $130.

"With this encouragement we worked harder, and laid out the ground in front in lawn and flower-beds, gathered stones for borders and also for forming the letters 'S.S. No. 20' on each side. These stones, when whitewashed, looked very attractive, and together with the flowers drew marked attention.

"In the fall we prepared a small piece at one side for an experimental plot. In this we had two varieties of onions, lettuce and radish, also Swiss chard and Kohl rabi. Samples of vegetables were sent to different families with directions for cooking Swiss chard and Kohl rabi. This spring the trustees bought a piece of ground across the road for garden purposes, but as we did not get possession of it until June, results were not satisfactory, though we did raise some good corn and mangels. We now have all our ground ready for spring work. We have planted a number of peach stones, butternuts, hickory and walnuts to raise seedlings, by way of experiment.

"We won a prize, $3.00, on our flowers at the Township Fair in 1912, and first prize, $5.00, on our flowers and vegetables in 1913.

"The instruction sheets and bulletins sent out from the Experimental Union are of the greatest assistance in our gardening. The trustees and parents are in full sympathy with the movement."

Hints for the Library

Larousse Dictionnaire Complet Illustré de la Language Francaise. With numerous illustrations in Colour and Line 8vo, cloth; 75 cents. Librairie Larousse, Paris and J. M. Dent & Sons, London and Toronto. An invaluable aid to the teacher and student of French. This little volume is handy for consultation, and contains an immense fund of information in very compact form. It is up-to-date in every respect, every word being explained by examples of its use and by reference to synonyms and antonyms. It is identical with the *Petit Larousse*, except that it does not contain the cyclopaedia of geography and history. One of a series of valuable works in modern languages by these publishers of "Reform method" text-books. W. C. F.

Features of French Life, by Frank R. Robert: Parts I and II. Two volumes. Cloth, 25c. each. J. M. Dent & Sons, London and Toronto. These two little books are designed to be used as elementary readers to assist the teacher to give some idea of the life and ways of the French people. They deal with topics of special interest such as railway journeys, schoolboy life, the soldier and sailor, national festivals and customs, etc. Each chapter is followed by a *questionnaire* to test the pupil's understanding of what he has read, and by a vocabulary of the words arranged in groups associated in meaning. Quaintly illustrated. Would be valuable for supplementary work in junior classes. W. C. F.

Methods of Teaching Primary Reading*

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II.

IV. The Word Method.

1. *History.* In our recent study of the alphabetic, phonic and phonetic methods we observed that they present a more or less logical course of development—a development which resulted from the endeavour of one method to cure some outstanding defect in the other. A similar endeavour to cure another defect that was still common to all three methods gave rise to the word method.

Whether consciously or unconsciously, the exponents of the word method have based their argument on the *Law of Resultants.* This law states that in the result there is always to be found *a something* that is not to be found in any of its elements. For example, $H_2+O=$ water. But to which of the elements does the *wetness* belong? This same law is, of course, equally valid in the psychical world.

The exponents of the word method claim—and I believe rightfully—that a word is not the mere synthesis or sum of (*a*) letter-names (alphabetic), or (*b*) letter-sounds (phonic), or (*c*) letter-appearances, but that it has a character or *personal* appearance of its own and is recognised just as we recognise a person, a horse, or any object, viz., by its total personal appearance. The idea that a word is the sum of letter-names finds no acceptance or support in the present day, and hence may be dismissed without further comment. We find no such uniformity of opinion with respect to the second point. The advocates of the phonic method, if not explicitly, at least implicitly, claim that a word is the synthesis of letter-sounds. Against them is arrayed those persons who claim that the great majority of consonants, as discrete letters, have no sounds whatever; also, those records of the human voice which point to the fact that such a word as "pen", for example, has but one sound and not three. Doubtless this latter position is *technically* correct. But it is only fair to concede that phonic teachers, working with more or less close approximations of the proper sound, do obtain marvellous results. The positive side of the argument, however, as set forth by the exponents of the word method, has always appealed to me. "We recognise words as we recognise people." Though it is true that our friend's facial appearance

*See January number for Part I.

is made up of the colour of the eyes, complexion, contour of the face, etc., nevertheless we do not recognise that friend by first recognising the colour of the eyes, then the complexion, etc., in serial order and then uniting these into a complex. Nor did the time ever exist when we recognised him in that way. Our inability to recall the exact details of the facial appearance of some of our most intimate friends really proves that we never knew these details. But we do not experience difficulty in recognising our friends. The reason is that we recognise by means of the *general dominating features* and not by the *discrete elements* which really make up those features. I believe this exactly parallels what actually takes place in the normal recognition of words. Normally, we recognise words through their *general dominating form* and not the *discrete letters* which make up that form. That is, the total sound of a word is associated with its total appearance, and is suggested by that total appearance just as the object pen suggests the word pen.

This method found its first advocate in Comenius, and is outlined in that wonderful book, "Orbis Pictus", which was published about 1658. However, Comenius was much in advance of his time, and after his day we find no further mention of the method until 1828. In this year an American author published the Worcester Primer, which was based, at least partially, on the word method. About 1850, Horace Mann, one of the world's greatest educationists, became its able advocate and exponent. From that day to the present the method has been given varying degrees of prominence in all primary class-rooms.

2. *Steps.* (See tabulated form in January number. See also, sections 12, 13, 14, 15 of the Primary Reading Manual for particular examples of present-day procedure.)

3. *Merits.* (1) The child's attention is directed to the *form* of the word through the *thought* the word expresses. This is psychologically correct since a child's interest centres in content, not in form.

(2) The method endeavours to solve the real problem of primary reading; that is, it endeavours to give the child the power of independent and automatic word-recognition, and at the same time make "the grasping of the thought or content" the essential part of the process.

4. *Defects.* The best that can be claimed for the method is that it gives the child the power to recognise old words in new connections. Hence it fails to give real independent word-recognition power. The gravity of such a defect cannot be overstressed.

V. The Sentence Method.

1. *History.* The sentence method, which first appeared about 1890, bears a very strong resemblance to the word method both in its

origin and application. The method is built upon exactly the same foundation, viz., *The Law of Resultants*. The exponents of this method agree with the position taken by the advocates of the word method. But they go further and claim that a sentence is not the sum of word-names, word-sounds, or word-appearances, but that each sentence has a distinct and well-defined appearance and sound of its own. They further claim, that the proper rendering of this "distinct sound" can be given only when the reader or speaker has a thorough grasp of the thought. In this last position the writer most heartily concurs, and, further, believes that the habitual disregard of this principle is one of the prime causes of monotonous reading.

2. *Steps*. (See tabulated form in January number.) The initial step in these two methods is the same. The first endeavour is to give the child a clear, well-defined concept. (In this connection see section 12, Primary Reading Manual, for a concrete example and fuller explanation.) But just at this point arises a little logical or grammatical difference. The exponents of the sentence method claim that in thinking about things (e.g. "map"), we think in complete thoughts, and hence that which expresses the complete thought (i.e. the sentence) should be the basis of our reading. So instead of beginning with single words, as in the word method, they begin with sentences. The third step is to make the child acquainted with the individual words which make up these sentences. The moment the child can do this he can recognise *these* words in new connections and in the reading of new stories.

3. *Merits and Defects*. "Words, like window-panes, are things to look through, not things to look at. The process of reading—par excellence—is that of grasping the thought." The sentence method comes closer to this standard than any of the other methods which we have thus far studied. It gives prominence to the real purpose of reading from the very outset, and endeavours to overcome the more mechanical difficulties, such as word-recognition, through the spontaneous interest created by the thought content. In other respects its merits and defects are practically identical with those of the word method. As in the word method, the real defect is that it does not give independent word-recognition power.

Raymond's school report was not what it should have been and his father remonstrated with him sternly.

"It isn't as if you couldn't get good reports if you tried," he said. "At the beginning of the year you did well, but the standings reported here are much lower than they were before Christmas."

"Well, you see, papa," whined Raymond, seeking any sort of an excuse, "every thing's marked down after the holidays, you know."

The Use of Canadian Indian Ornament in our School Art

R. F. FLEMING
Art Instructor, Normal School, Ottawa

HISTORIC ornament is not used much in the art work of our Canadian schools; still it is not obsolete. We remember in the old Ontario drawing books the Greek anthemion, the Maltese cross, and the winged globe of Egypt. In many of the present-day text-books in art a few pages deal with historic ornament. But these historic forms have had a very limited application, more generally for decorating something to which they were not in the least related.

But did it ever occur to us teachers of art, that in whatever little we have done in the study of historic ornament, we have almost universally ignored the aboriginal art, the Indian art, of our own continent and country? And why? Because our art is not beautiful? No; because we are not acquainted with it, and have not appreciated the beauty it contained.

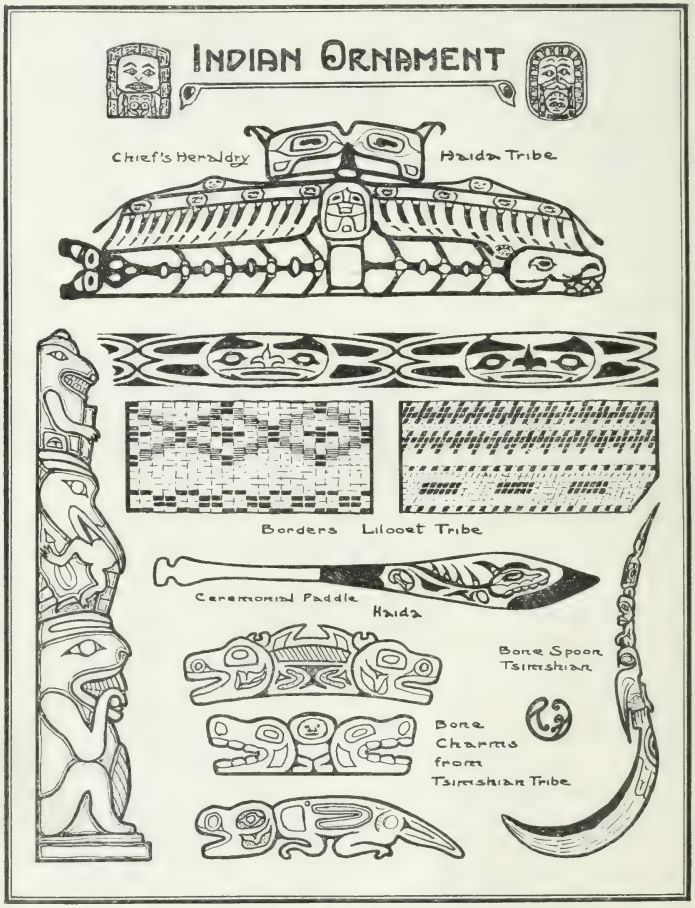
Our Indian art *is* beautiful; it has a characteristic conventionalisation of shapes in its design, in which the animal *motif* plays a prominent part. Its colour effects are strange and subtle; altogether it is unique, and above all it is consistent with itself and with its origin.

It is true that our Federal, our Provincial governments, certain scientific societies, some antiquarians, and even some schools and colleges have gathered and preserved collections of our Indian art, but few indeed have found a way of relating its beauties to the art work of our schoolrooms.

As we in the Ottawa Normal and Model Schools have done some pioneer work in studying our Indian art (not great it is true, but a beginning), perhaps it may be of interest to teachers who teach art to learn of what we are attempting to do in this branch of art work.

First of all, let us state the situation here. We have in our school teachers-in-training, and pupils in the Model (elementary) school; there is no collection of Indian antiquities in the institution. The great new Victoria Memorial Museum with its extensive and beautiful collection of Canadian Indian arts and crafts is, however, in the city, but half a mile away, too far away for the museum to be used as a class-room for drawing, but of use to visit and see its collections.

As the Indian art we desired to study and use was not directly at our hand, it occurred to the writer that he might copy some of the more interesting designs in India ink, and have them reproduced in zinc plates. Thus these plates (see illustration) were made, and a few hundred copies printed off. We then had a practical means of bringing the Indian art forms to the immediate notice of the students and pupils.



These sheets were then put in the hands of one of the senior classes of the Model School in the art room. The origin and character of the forms were discussed. Then the question was asked, how could these forms be used in art work. A dozen answers were ready:

(*a*) to illustrate a written composition on Indians,
(*b*) to decorate a composition on Indians,
(*c*) to decorate an initial,
(*d*) to decorate booklets, books, covers, programmes, cards, etc.,
(*e*) to decorate blackboards,
(*f*) to decorate a whole room at home,
(*g*) to assist in making an Indian costume,
(*h*) to weave in paper, raffia, and other materials in the manual training room,
(*i*) to decorate certain models in manual training,
(*j*) to make into stencil and wood-block designs.

The first thing necessary, however, was for the class to become more *familiar* with the ornament it was proposed they should apply. The pupils were required to copy certain of the forms on the sheet given them. The original colours were described and certain of the designs drawn in colour on the blackboard, so that the pupils could add colour to their designs. Further information was given to the class as to the kind and use of colour generally present in Indian design.

On a succeeding day the first exercise in applying the Indian ornament was a *composition on Indian life* (which had been previously arranged for with the class teacher). This gave a good opportunity to the pupils for exercising their ingenuity in practising different ways of applying the ornament,—as a decoration to the title, to the initial letter, amongst the text, as a border around the whole page or at the bottom, and as a tail-piece. The pupils found their compositions not only more beautiful in appearance, but the text had a newer, fuller and richer meaning.

Next we tried designing booklets, again on the subject of Indians or their life and habits. The materials needed were a piece of cover paper, two pieces of plain drawing paper (about 11 x 8 doubled), pencils, rulers, and afterwards paints. The text was to be *lettered* rather than written in script. The cover had to be designed with title and ornament, the title-page inside with pupil's name, a decorative initial letter, the first and succeeding pages with appropriate margins, borders and other decorations, and illustrations if desired. What splendid problems the pupils found in the booklet,—how to fit spaces, how to balance effects, where to put ornament, how to harmonise colours. The booklets took about four half-hour lessons to complete. The work was very interesting, and the results were gratifying. The productions were all different, each had its individuality, each was a real creation on the part of the pupil.

The other senior classes of the Model School and the classes of the teachers-in-training likewise copied and suitably applied the Indian ornament.

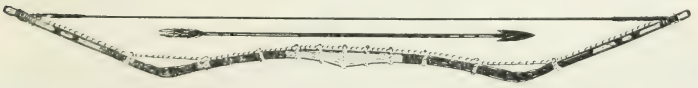
Then we ceased our Indian art work for the year, but the effects of its study did not cease. Since then the Indian forms have been discov-

ered in unsuspected places and used for decoration in a variety of places and ways. Even one boy who had some Indian mementos on hand utilised then in designing a den of Indian character, adding here and there some of the designs learned in school. Then, too, our efficient gardener (J. M.) took note of the circular porcupine quill design of the Eastern Woodlands in coloured chalks on the art-room blackboard. He said: "What a beautiful flower-bed that would make, about sixteen feet in diameter; for the blue I could use the lobelia; for the purple, the foliage leaf plant, etc." He has planned to set out the bed for next spring.

Thus we have had some appreciable success in beginning what is here a new phase of art work—the use of our American aboriginal art—*our own true home art.*

And what we have done can be accomplished by other schools who have collections of Indian art available, or failing that, books on anthropology with a plentiful supply of illustrations, such as many of the volumes published by the Smithsonian Institute of Washington, D.C. The other requirements on the part of the teacher are some considerable enthusiasm and the ability to copy comparatively simple designs in lines.

Let us not overlook the plant which grows at our own doorstep!



Suggestion for the Class-room

Uses of Gilt Stars.—There are few things that can be used to better advantage in the schoolroom than the little gilt stars, which may be obtained at any school supply house. Write names of pupils on cardboard and place a gilt star at the end of the week after the names of all who have not been absent or tardy. In looking over the pupils' papers paste a star on the best ones. A gilt star may be pasted on the report cards for the week or month as the case may be when the pupil has reached a high rank, or achieved a victory in some way. Do not use the stars too freely, let them have a value and be given as such.—*School Education.*

Schoolroom Decoration

ELLA NEWMAN
Public School, Roebuck

THE schoolroom should be the brightest amd most attractive place in the community. All teachers realise this and should help to make it so.

But teachers try to excuse themselves by saying that they can do nothing; the trustees take no interest; they will grant no money, saying that what was good enough for them is good enough for their children. I do not believe this excuse is adequate. I think that if a teacher is truly in earnest and uses a reasonable amount of tact, she can get the co-operation of her trustees. If the school board will not help, there is no reason why she and the pupils could not raise some money themselves. In my own school we solved this problem by getting up a concert, and letting the people know that it was for the purpose of getting pictures. The children took a great interest in it and appreciated the pictures more because they had helped to get them. When the school board saw what we had done they granted us some money to finish the framing of our pictures. The children at other times have gladly contributed for such purposes.

"The principal object of school decoration is the creation of a congenial atmosphere for the unfolding of every faculty and especially for the development of taste." In all efforts to beautify your room avoid everything that is out of taste. The decorations, however few they may be, should be such as will tend to elevate the taste of the pupils rather than feast their eyes with colour.

The art of school decoration is like all other arts. There should be unity. No room looks well where the decorations are profuse and varied. Every detail should combine to make a pleasing whole. The tints of the walls and ceiling should harmonise with the woodwork and other decorations in the room. If the walls are of plaster, there should be a moulding about eighteen inches from the ceiling and the colouring of the walls and ceiling above this should be a light cream. Below this the walls might be a pleasing shade of green or grayish green, or, if the room is dark, a certain shade of fawn without the suggestion of red might be appropriate. This scheme of colouring is not hard on the eyes, and, while it is sufficiently bright, it forms a pleasing background for any picture. If metallic walls and ceilings are used, they should

never be painted in dark, dismal colours, which are depressing to the spirits. The walls, ceiling, blinds and other details should make an harmonious setting, and serve to show the pictures and other decorations to the best advantage.

The teacher should insist upon having comfortable and decent seats for the children. No room appears well with broken, dilapidated furniture. Then the desks should be kept varnished. It is surprising how a little varnish or hard oil will improve appearances. Ink does not then soak into the wood so readily. The teacher's desk should be one of the most attractive pieces of furniture in the room for it is there the eyes of the children rest most frequently.

Pictures should adorn the walls of every schoolroom. "Pictures on the walls of our schoolrooms mean pictures on memory's walls." Pictures serve three great purposes. They decorate the room, are valuable for picture study, and aid in the building of character. Every great picture has some lesson to teach, which will make a lasting impression on the lives of boys and girls.

Very few homes are void of pictures. If they are a necessity in the home, are they not more so in the schoolroom? Ruskin says: "In the emptiest room the mind wanders most, for it gets restless like a bird for want of a perch, and casts about for any possible means of getting out and away. Bare walls are not a proper part of the means of education; blank plaster about and above is not suggestive to pupils."

Great care should be used in the choice of pictures. "A single picture carefully chosen and judiciously hung may exert a deeper and more abiding influence than half a score of pictures selected with less care and scattered about the room, calling the attention hither and yon until it settles upon nothing in particular."

Then just as great care should be taken in the selection of frames for the pictures. We know that the frame should set off the picture. Simple oak frames are best. They set off the picture and do not draw too much attention to themselves.

It is best to allow the children to help in the choice of pictures because then they take a greater interest in them. I know my pupils took great pleasure in choosing pictures for our room. We got three large ones 22″ x 28″ and had them framed in oak. Then we got a number of smaller pictures 7″ x 9″ and 10″ x 12″. All the pictures, both large and small, are in shades of sepia and are reproductions from such great artists as Millet, Landseer, Bonheur.

The children passe-partouted the small pictures in their manual-training work, and I think they take pride in preserving what they help to plan and execute. We also got a number of studies of birds and animals in natural colour, and formed a border of these above the wainscoting.

Pictures of our great authors and statesmen may be used in this way. They might be placed on suitable mounting-board, faced with glass, and sealed with room-moulding.

Besides pictures, flowers are a great means of decoration. During the summer plants can be kept in the windows, vines can be trained up over them, and ferns can be brought from the woods to contribute an air of coolness and beauty. There should be a vase with flowers on the teacher's desk. A flower committee might be formed to see that fresh contributions are made daily.

This feature of the work might provide valuable lessons on the arranging of flowers. Show the children that sometimes a few flowers can be arranged much more beautifully than a great number, and that one kind is better than a variety.

It is important that our schoolrooms, where children spend so many months and years, should be places where they will receive inspiration and form noble ideals and standards for the future.

Book Reviews

Piers Plowman Histories: Junior Book VI, by J. J. Bell, M.A. George Philip & Son, London. 2*s*. We have received this additional volume to the series reviewed in our September issue. This book is very suitable for Fourth Book classes. The narrative is easy reading but not too simple for children of from twelve to fourteen years of age. The period covered is from the Old Stone Age to the end of the reign of Richard III. We have already recommended this series for the school library. Junior Book VI is quite up to the standard and will be read with avidity by children who are acquiring a taste for history. It contains eighty-two illustrations and maps.

The Building of the British Empire. A Reading Book for Schools, by E. M. Richardson, B.A. G. Bell & Sons, London. This little book deals briefly with the growth of the great empire for which the British race is responsible. The story of the "Expansion of Britain" is told in a connected series of historical episodes. Attention is given to the geographical influences which so powerfully affect the history of nations. The illustrations and the maps are excellent. The author has done a real service in giving in one volume such a wealth of important and interesting material. This book should be available in the school library for Fourth Book pupils.

The Modern Method of Handling School Epidemics

H. W. HILL, M.B., M.D., D.P.H.
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THE old method of handling an outbreak of scarlet fever, measles, etc., in a school too often consisted in sending the sick child home and hoping for the best; then, when more cases occurred, closing the school for "fumigation" and opening again after this rite had been performed with all due ceremony; on the occurrence of still more cases, the School Board and Board of Health met and closed the school for two weeks; when, on opening it, a fresh crop of cases developed, they closed it for six weeks.

The modern method keeps the school open, *as a means for controlling the outbreak*; it disregards "fumigation", except in so far as that ancient form may relieve the minds of the more nervous individuals of the community; and it seeks the *sources* of the infection itself in order, not merely to control the outbreak in the school, but to abolish the disease from the community.

The writer, while in charge of Contagious Diseases for the State Board of Health of Minnesota, handled an average of two epidemics per week and found these methods absolutely reliable and efficient.

The principle underlying the system is this—the ultimate source (or sources) of the infection is always some infected person (or persons)—find the source, prevent further spread, and the disease *must* die out.

Thus in a diphtheria outbreak, the epidemiologist merely goes to the school, takes cultures from the noses and throats of all in the affected room or rooms, perhaps of all in the school, including always the teacher and janitor; dismisses the children until next day; then incubates and microscopically examines the cultures, finding thus all the infected individuals. These, with their brothers and sisters are sent home, and kept at home. The uninfected remain in attendance at school, with perfect safety. So far as preventing further infection occurring in the school, this is all that is necessary, and the school is closed only if the teacher herself proves (as sometimes happens) to be the "guilty party".

This does not of course affect the spread of the disease outside of the schools. That duty rests with the Board of Health. The children sent home as infected must be kept from mingling with the uninfected children at Sunday school, moving picture shows or play, and all other infected persons outside the schools must be sought out by epidemiological methods and restrained also.

In all instances where these methods are followed, the schools at least are kept clear of infection; and if a proper follow-up system be employed for cases unconnected with the schools, the disease can be eliminated with certainty from the community as well as the schools within three weeks, usually much sooner.

In scarlet fever, measles, German measles, chickenpox, etc., cultures cannot be employed. The epidemiologist must therefore rely on clinical examination of the children. Thus in scarlet fever the children come to him at the school, in a good light, daylight if possible, and he examines nose, throat, ears, glands, front of chest, hands and sometimes one foot. The examination takes from 30 to 60 seconds per child. Suspects are set aside and again examined, and if confirmed, are sent home with their brothers and sisters.

The other children are free to return to school, but in scarlet fever, the examination is repeated daily, first thing after school opens, for one week (in the case of measles, German measles, chickenpox, two weeks), to detect those children who may have been infected, without developing symptoms, during the earlier examinations.

Similar methods are followed in the other infectious diseases.

This does not pretend to be a complete account of the methods such as would be suitable as a guide for the professional man, but is merely on outline to indicate the teacher's share, and to explain the methods so that the school authorities will understand what is being done.

It does no harm and may at times do some good to wipe down the desks of the infected children, the floor immediately surrounding them, the door knobs they handled most, etc., with 5% carbolic acid solution or better 1 in 1000 bichloride of mercury, both strong poisons. Also the personal belongings of such children, especially their books, pencils, sponges, slates, etc., should be set aside against their return and not used by others in the meantime. But, it is persons, not things, which distribute infection chiefly in the schools, and the things that enter into the spread of infection do so for a short time only—practically speaking, only during the very brief period between the deposit in or on them of the infected discharges, and the drying of those discharges.

The transfer of infection through old books, used long previously by infected persons, made a pretty theory, but has been exploded as having no real importance in the spread of disease.

Compare, for instance, a single infected child, breeding the germ in its body and throwing out continuously by mouthspray, sputum and hands, fresh, moist, active, living germs directly into other persons' mouths —compare the harm such a child does with the harm done by minute dried droplets, attached firmly, in the very act of drying, to the surface of a book or desk; from which surface they can be removed, once dry,

only by considerable friction and moisture, the germs being inert or dead from the drying itself. Is it not obvious at once that the new methods, dealing directly with the very fountain heads and breeding grounds of the germs (the infected body) are immensely superior to those dealing with the mere things that surround the fountain head? If a water pipe has burst and is deluging a room, would you stop the leak itself or neglect it entirely and merely wipe up a few of the scattered drops that fall on the fringes of the curtains?

Book Reviews

Methods in English in Secondary Schools. 16 pages. Price 15 cents. Faculty of Education, University of Toronto. This is bulletin No. I and deals with Class Procedure in grammar, composition, literature, oral reading and spelling. It contains a list of books suitable for class study in the Lower, Middle, and Upper Schools, also a list of books recommended for home reading, and a list of 27 books of fiction suitable for the Lower School.

Freshman Rhetoric, by John Rothwell Slater. Pp. iv, ff. 353. D. C. Heath & Co., 1913. $1.00. The man abreast of the tendencies of current educational literature will probably be shocked to find that one of the avowed reasons for the purchase and use of this book is that "more emphasis than usual is laid on the value of freshman rhetoric as the medium of general mental discipline". But the author's practice is better than his theory. The book is practical in the best sense of the term and no freshman using it should henceforth be ignorant of the "mechanics" of writing and debating. A good style, however, is not acquired by the mechanical learning of any rules. Constant practice is needed and, above all, persistent and critical reading of classical English authors. The author has been catholic in the selection of his topics and has included chapters on note-taking, use of a reference library, news writing, and speeches for special occasions. There are 700 original subjects for themes, essays and written exercises. We heartily commend the volume to any one wishing to obtain a good command over the technique of good English, both written and spoken. P.S.

A First Virgil. George Yeld, M.A. Blackie & Son, London, Eng. Cloth, pp. 116; price 1*s.* 9*d.* This is an attempt to present easy selections from Virgil in such form that they may be read by pupils in second or third year Latin. It is well illustrated and contains an excellent vocabulary. J. O. C.

The Criticism of Composition

M. A. SORSOLEIL, B.A.
Normal Model School, Toronto

DURING several years' experience as critic teacher, the writer has had frequent occasion to discuss lessons in composition with teachers-in-training. In the course of these discussions many of the students have shown that, while they retain quite clearly the method of analysing and preparing a theme for composition, their idea of how to criticise the completed work is vague in the extreme. The value of a detailed organisation of the material to be used has made a more lasting impression upon them than the necessity of a careful and definite examination of what they have written.

The critical reading of the written productions of a class demands the expenditure of a great amount of labour and time. It may be asked quite reasonably, "Are the results commensurate with the effort expended?" After a considerable period of observation and a patient and sustained trial of the method, we are forced to conclude that an elaborate system of signs and a profusion of marginal corrections are of little use, unless care is taken to see that the pupils read and understand the criticisms so made. On the other hand, to return compositions without comment and with no indication of their worth, save that expressed by their value marks, is an injustice to the pupils, and not infrequently the cause of great discouragement. Valuable assistance may be rendered by indicating one or two characteristic defects in the composition, or by commending some evidence of growing power. Having his attention drawn only to the most noticeable weakness in his work, the pupil is more likely to effect an improvement.

But little need be said regarding the criticism of oral composition. The chief defects to be overcome are a lack of coherence in thought, a paucity of language, and the use of interminable sentences. With younger pupils, at any rate, the criticism should be specific. Both the matter and the language should receive attention, and short incisive sentences required.

It is very important that students should be led to examine and to criticise their own efforts in written composition. By the frequent use of the board, the whole class may be given the benefit of the criticism, and each member furnished with an opportunity to compare his own work with the standard set by the teacher. A paragraph which represents the average work of the class, written on the board by one of the

pupils or by the teacher, will afford ample scope for criticism. Under the guidance of the teacher, the members of the class examine the paragraph along definite lines, and definiteness in this work is essential. The form, the matter, the paragraph structure, the sentence structure, the choice of words, the logical development of the thought, these and other elements entering into composition may be considered in turn. Two or three of these points will furnish sufficient material for one lesson. Errors are noted, corrections are made, improvements are suggested and discussed, and commendable features are pointed out. As one paragraph will not lend itself for criticism on all the points mentioned, other paragraphs may be taken as need arises.

The work of reconstruction must not be neglected. A remodelling of the paragraph which has just been criticised will furnish a helpful exercise. Directed by the teacher, the class may re-write the section under consideration, carefully weighing the phrases and discussing the relative merits of the expressions suggested. The new paragraph may be lacking somewhat in freedom and spontaneity, but the marked improvement in accuracy of statement and clearness of expression, and the means by which these were obtained cannot fail to assist the pupil in the consideration of his own work. The re-written portion should be read aloud once or twice, that the ear may aid in discerning the improvement.

Criticism should be sincere and sympathetic. Neglect and indifference on the part of the teacher lead to careless work on the part of the pupil. Ridicule and unkindly comment cause harmful repression and deprive the pupil of the pleasure and culture involved in the free and natural expression of his thoughts.

What About This? A boy was asked by his teacher: "What, if any, is the difference between lightning and electricity?" "Please, ma'am," said the boy, "lightning is free."

The scientific information which modern children pick up in school is sometimes disturbing to their elders.

So it was with two youngsters who were enjoying a visit to their grandmother and were watching with interest the preparation of dinner in the old-fashioned kitchen.

"What's in that pot, Grandma?" asked Hazel, pointing to an iron kettle on the old range.

"Water," said the grandmother. "Just water and the sound it makes when boiling is a bad fairy ——"

"No 'taint," interrupted Tommy, "that's the microbes crying."

—*American School Board Journal.*

Current Events

The Ulster Problem.—Within the next few months the British House of Commons will pass the Home Rule Bill for the third time. Under the provisions of the Parliament Act, the House of Lords will not have an opportunity of rejecting the measure again. It will go at once to the King for his assent.

If the Bill becomes law, what will Ulster do? Sir Edward Carson and the other leaders of the opposition to Home Rule assert that they will stand by the terms of the Covenant and that they will not pay taxes to any Irish parliament established under the terms of this Act. Sir Edward Carson asserts that the Loyalists of Ulster will themselves organise a provisional government for Ulster, regardless of the Imperial Parliament.

Since last July the enrolment of the Ulster Volunteer Force has been carried on quite openly. Over a hundred thousand men are said to have registered their names. Sir George Richardson, a retired general of the Imperial Army, has undertaken to command them.

The activity in Ulster has prompted a somewhat similar activity amongst the friends of Home Rule in southern Ireland, and last month the British government acknowledged the gravity of the situation by issuing a proclamation prohibiting the importation of arms into Ireland.

A meeting of business men of Ulster, held in Belfast a couple of months ago, endorsed the stand taken by Sir Edward Carson. This would seem to indicate that the movement has very substantial backing. Five million pounds has been subscribed as a guarantee fund to provide for any losses the volunteers may suffer if they go the length of armed resistance. The situation is very grave and an attempt is being made to bring the parties together with the idea of discussing possibilities of a peaceful settlement of the question.

The opponents of Home Rule maintain that the government had no mandate to pass such a bill without submitting the whole matter to the electorate of Great Britain at a general election. Some are willing to submit to the measure if Ulster is exempted from its provisions. This solution, however, is not an easy one. Many in Ulster itself are in favour of Home Rule. In fact, a majority of the present members for Ulster in the Imperial Parliament will vote for the measure, and many who feel that they have common cause with Ulster live outside its geographical boundaries.

The government, on the other hand, maintain that they are pledged to a measure of Home Rule and that this was made clear at the last general election. They assert that the present bill safeguards the interests of Ulster, and that they are willing to give a sympathetic hearing to any further measures that may be suggested with that end in view. In the meantime each party asserts its willingness to discuss measures looking to a peaceful settlement of the question, but each seems to be waiting for the other to suggest a definite plan. Under the terms of the Parliament Act, the bill, if it is to be carried over the heads of the House of Lords, must be passed the third time within two years of the first passage. The time is getting short.

Australia's Citizen Army.—Four years ago the Commonwealth of Australia introduced the principle of compulsory military training. Under the provisions of the Act then passed a cadet system was organised for the physical training of all boys between the ages of twelve and sixteen. The last two years of the course include military drill to which each cadet is required to devote thirty-two half days a year. Between the ages of eighteen and twenty-five all male citizens are required to undergo sixteen half days of drill a year (commonly held on Saturday half holidays) and, in addition, to spend eight days continuously each year in training in a military camp. Those who have scruples of conscience against bearing arms may substitute training for the hospital and ambulance services. Further exemptions, of course, are inevitable on account of health and of distance from any centre of military training. A military college is organised to train officers and in this the whole expenses of those training are paid by the government.

As the scheme has only been in operation for three years, its full effects cannot yet be estimated. It is hoped that in time the system will provide an army of one hundred and twenty thousand men over eighteen years of age, and nearly as many senior cadets undergoing military training.

There have been, of course, many who objected to spending so many half holidays in military drill. In some cases the Minister of Defence has imprisoned the objecter during the length of time he would otherwise have spent in training. On the whole, the situation has been generally accepted by the citizens. The system, however, is proving much more expensive than was anticipated, and it is not impossible that the question of expense alone may require some modification of the scheme before it is entirely worked out on its present basis. W. E. M.

RATHER "Teacher, somebody hit me on the head with a horse-shoe." "Well, now, Tommy, that's what I call hard luck."

Suggestions for the Class-room

Efficiency.—To be efficient the teacher must know how to secure the maximum results with the minimum expenditure of time and energy. She must make every movement and moment count. Blackboards, supplies, books all ready for use, a definite programme for the period prepared, prompt beginning and a systematic carrying out of the programme, teacher and pupils working together harmoniously at something worth while—these are the important factors in successful schoolroom procedure.—*American Education.*

Criticism.—Attention in all work should be directed toward the right way, and not the wrong way. Emphasis on wrong pronunciation, wrong spelling, wrong results in anything, is discouraging and repressive. Just enough emphasis should be placed upon the wrong form to convince that it is wrong; then attention should be directed toward the form that is correct.—Geo. H. Tapy, in *Educator–Journal.*

Kinds of Education.—"I should divide education into three kinds —cultural, liberal and vocational. Cultural education may be defined roughly as education which prepares us for the eisure associations of our lives. Liberal education is education which prepares us to enter profitably into those relations in which we are workers, but not into the one central relation of our lives which we call our vocations; it is preparation for the serious duties which come upon us outside of our main work-duties as members of the family, of the State, and of the various voluntary organisations. I enter, for instance, into a civic organisation to do a definite work. That is not my vocation, but an avocation; yet it is not a matter of leisure. It is not play, but work. Various duties of that kind fall upon every one of us, and liberal education I should define as education which prepares us for those duties. Vocational education prepares us for one central work in life which supports us."—Robert A. Woods, in *American Education.*

Productive Scholarship.—There is a dearth of productive scholarship. We have few writers among us; few who are doing positive, progressive and constructive work. There is altogether too much satisfaction with things as they are and a masterly inactivity, little or no intellectual effort to produce something that will be of permanent worth and throw light upon the unsolved educational problems of the present day.—C. W. Blessing, in *American Education.*

Hints for the Library

Selections from English Literature, by Elizabeth Lee. Books I and II, 1*s*. 6*d*. each. Books III and IV, 2*s*. each. Edward Arnold, London. These four books are intended for the school library, for independent reading on the part of students of from fourteen to eighteen years of age. Within the compass of these volumes the author has brought together a collection of texts that serves to show English Literature under its various forms and aspects, and that assists the reader in appreciating its continuity through six centuries. They should be of great value in enabling students to gain, before leaving school, a wider knowledge of the content of English Literature than is usually the case. They contain gems of poetry and prose with which everyone wishes to be familiar.

Standard Song Classics, by Baldwin and Newton. Ginn & Co., Boston. A unique collection of forty-one time-tested melodies. Each number appeals strongly to the emotions and the intellect through its melody, verse, and harmony. The collection provides great variety in every phase of art. The consideration of details has been thorough.

An Outline History of English Literature, by W. H. Hudson. 2*s*. 6*d*. net. G. Bell & Sons, London. A very interesting and instructive "little book on a big subject". It deals with the different divisions in English Literature under the name of the most representative writer of the time, as the Age of Chaucer, the Age of Shakespeare, the Age of Milton, the Age of Dryden, the Age of Pope, the Age of Johnson, the Age of Wordsworth, and the Age of Tennyson. Under these headings the literary tendencies and developments, the authors and their works, and the histoical influences are discussed.

Outlines or *Victorian Literature*, by Hugh Walker and Mrs. Walker. Cambridge University Press, London. This book deals with: 1. Carlyle and the Systematic Thinkers. 2. Poetry. 3. Novels and Novelists. 4. The Historians. 5. Biography and Criticism. 6. The Fragments that remain. The principal authors of the period are presented not merely as writers but as men, which makes the volume unusually interesting to the ordinary reader. A cheap and convenient book of reference for the ordinary school library.

A First Book of Composition for High Schools, by Briggs and McKinney. Cloth, 300 pages, 90 cents. Ginn & Co., Boston. A very practical book with numerous exercises for both oral and written composition. It places the emphasis on the qualities of good writing rather than on forms and formal rules. It furnishes material for a two-year course. Such prime qualities as sincerity and definiteness are treated after a plan carefully arranged and graded in difficulty.

Advanced English Grammar, by Kittredge and Farley. Cloth, 333 pages. Ginn & Co., Boston. This grammar is intended for those who have already studied the rudiments. It affords the means for continuous and systematic study of the subject, and is also useful for reference in connection with the study of composition and of literature. Certain topics of importance, such as *shall* and *will*, the infinitive, conditional sentences, have been treated with unusual thoroughness.

L'Invasion ou Le Fou Ye'gof. Erckmann-Chatrain. 344 pages. 3*s*. Cambridge University Press, London. An excellent edition, belonging to the Pitt Press Series, with clear, readable type, good notes and vocabulary.

Fielding's Journal of a Voyage to Lisbon. Edited with Introduction and Notes by J. H. Lobban, M.A. Cloth, 116 pages. Price 1*s*. 4*d*. Cambridge University Press, London. A book which is indispensable to the forming of a just estimate of the character of one of our greatest men of letters, and which gives a demonstration of Fielding's genius, serene courage and large-hearted humanity.

Practical Typography. A series of lessons by George E. McClellan. Price postpaid, $1.50. The Manual Arts Press, Peoria, Ill. A course of printing exercises ready to place in the hands of the pupils. It explains and illustrates the most approved methods used in correct composition, and is especially intended to meet the present demand for problems that will set a high standard in school printing. The unique feature of the work lies in the fact that in the early stages of the course the pupil sets up in type a description of what he is doing with his hands.

Le Compagnon de Voyage et Le Briquet. Anderson. 32 pages. Price 4*d*. One of Black's Simplified French Readers, edited by F. B. Kirkman. These booklets are intended to provide easy supplementary reading for elementary classes. Adam and Charles Black, London.

American Literature, by William J. Long. Price $1.35. Ginn & Co., Boston. This book divides the literary history of America into four great periods. The study of each period includes (1) an introduction, giving an outline history of the period, its important events, and its dominant interests; (2) a survey of all the literature of the period, its general tendencies, and its relation to important literary movements in England and elsewhere; (3) a detailed study of all the important writers of the age. This includes an interesting biography of each author, in separate type, a review of all his works, an analysis of his most important books, and a simple but critical estimate of his place and influence in our literature; (4) a brief survey of the minor writers and of the notable miscellaneous works of the period; (5) a summary, with special bibliography, selections for reading, and various other "helps" to teacher and pupil.

Notes and News

[Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this Section.]

Mr. E. O. Liebner, B.A., science master of St. Thomas Collegiate Institute, has accepted a similar position in London Collegiate Institute.

Mr. A. W. Ferguson, B.A., formerly of Cobourg, has been appointed Principal of Plantagenet High School.

Miss Annaly Foote defeated Col. James Walker, chairman of Calgary School Board, by 1000 majority for a place on the board.

Principal Peterson of McGill was elected President of the Archaeological Institute of America, meeting in Montreal.

President Murray of Saskatchewan University and President Tory of Alberta University were Toronto visitors during the holiday season.

Dr. R. W. Garrett, professor of obstetrics and gynaecology in Queen's Medical College, and one of Kingston's oldest surgeons, has had to relinquish his work owing to ill-health.

The position of Principal of Crediton Continuation School has been filled by the appointment of Mr. H. R. Henderson, of Beaverton, Ont.

Miss Maud Rose, assistant in the Tamworth Continuation Class, has been succeeded by Miss Edna V. Eastcott, formerly of Millbrook, Ont.

Miss H. Jean McGregor of Caledonia has become Assistant in the Fingal Continuation Class.

Mr. Albert Merrill, aged 23, who was appointed Principal of the new Queen Mary School of Chatham, died after a long illness, without being able to take up his duties.

Mr. J. H. Davidson, B.A., formerly of Tillsonburg, will succeed Mr. T. R. Ferguson, B.A., as Principal of the Uxbridge High School.

Mr. G. R. Mikel, Principal of Colborne Public School, has resigned to accept a position on the staff of the Ottawa Public Schools. Mr. Ostrander of Hastings has been engaged in his place.

Mr. H. J. Haviland, formerly of Parry Sound, succeeded Mr. J. A. Hamilton as Principal of Hagersville High School.

Mr. John McLaughlin, Inspector of Schools in Manitoulin District for several years, died on the 19th of December.

The Advisory Industrial Committee of the Toronto Board of Education appointed Mr. P. W. Cole, A.R.C.A., a full associate of the Royal College of Arts, South Kensington, London, as teacher of arts.

Mr. H. L. Matthews, B.A., teacher of English and History in the Stratford Collegiate, will occupy a similar position in the St. Mary's Collegiate Institute in place of Miss D. L. Scott.

Mr. John McCool, B.A., Inspector of Public Schools, and Dr. Thos. O'Hagan, the Canadian author and journalist, were present at the opening of Jackson's School, No. 8, Greenock, one of the most beautiful rural school buildings in Ontario.

The Weston High School staff moved into their new and commodious $50,000 building on January 5th.

Professor Ernest Rutherford, of the Department of Physics in McGill University from 1898 to 1907, was knighted by King George on New Year's Day. Sir Ernest has done notable work in connection with radium and in 1908 received the Nobel prize for Chemistry.

Viscount Bryce, former British Ambassador at Washington, in his inaugural address at a conference of twenty-one educational associations at the University of London, put in the forefront a plea for the inclusion in the school curriculum of moral training based on religious principles. He also said he approved of the American contention that women make better teachers than men for the younger pupils.

Miss Clara Hanson, formerly of Mitchell, Ont., is teaching Moderns and English in the Continuation School at Milton West.

Miss Bessie Morton, who taught in Barrie in 1913, is now teaching in the Newmarket Public School.

Mr. F. W. French of Calgary was appointed Principal of the High School in that city. He was chosen out of 200 applicants.

Mr. W. D. T. Atkinson, B.A., a recent graduate of the Faculty of Education, Toronto, is teaching classics this year in Collingwood Collegiate Institute.

Miss Bewatch, of Trenton, has been appointed to the staff of Norwood High School.

Fire did $1,000 damage to the Central Public School, Smith's Falls.

The Dundas Public School Board have options on sites for a new school.

S. S. No. 9, Scarboro', opened a fine new two-roomed school.

On Monday evening, December 22nd, 1913, fire broke out in Bowmanville High School and did $3,000 damage. Principal Dandeno made arrangements, however, to open his classes as usual on Jan. 5th.

The value of illustrated moving picture slides for teaching Isaac Pitman Shorthand is being successfully demonstrated by the Merchants and Bankers School of Newark, N.J. Principal A. J. Harding, who originated and developed the scheme, has been working on it for the past year and recently began its use in his shorthand department.

A class in the senior section of the Dundas Public School won the attendance banner with an average of $99\frac{2}{5}$ per cent.

The final volumes of the Technical Education Commission report will be ready very shortly and will be laid on the table of the Dominion

House within the first two weeks after the opening. These last three volumes will deal with the observations and investigations of the Commission in Great Britain and Europe, and will also outline what has already been accomplished in the various Provinces.

Bishop Fallon of London, Ont., presented Miss Elsie Jenson, aged twelve, a pupil of St. Mary's School, with a prize of $100 for obtaining the highest standing at the Entrance Examinations of 1913. She got 605 marks out of a total of 650, and is the first in the province to attain the 600 mark. On this occasion Bishop Fallon urged parents to have their children endeavour to pass the Entrance Examinations before thirteen, and to make sacrifices, if necessary, to ensure them the higher education.

Mr. E. C. Drury, in his address at a meeting of the Dominion Grange, said he thought that to make remuneration commensurate with the responsible nature of teachers' duties, rural salaries should range from $900 to $1000 a year.

From the report of the proceedings of the fifth annual Convention of the Saskatchewan Educational Association we clip the following copy of a letter which may be of interest to those of our readers who are doing something in the matter of school decoration. The letter formed part of the report of Inspector A. Kennedy of Weyburn, Sask., Chairman of the Committee on the Decoration of Class-rooms:

Sir:—

I have the honour to acknowledge the receipt of your letter of the first instant asking whether pictures ordered by any school board or school principal for school class-rooms would be subject to duty or not.

I am to state that etchings (engravings) and lithographed prints or charts when specially imported in good faith for the use and by order of a school for class-room purposes and not for sale, may be entered without duty under tariff item 696.

I have the honour to be, Sir,

Your obedient servant,

(Signed) JOHN McDOUGALD,

Commissioner of Customs.

Department of Customs.

Ottawa, 9th April, 1912.

We are glad to number among recent exchanges, St. Margaret's College *Chronicle*, St. Andrew's College *Review* and *The Albanian* of Brockville.

Mr. J. L. Challinor, a recent graduate of the Faculty of Education, University of Toronto, has charge of the commercial work in Wallaceburg Continuation School. This is said to be the only Continuation School

in Ontario which is carrying on this work. In Wallaceburg they have special equipment and four typewriters.

Miss Annie Bentley, who graduated recently from the Faculty of Education, Toronto, is teaching in Wallaceburg Continuation School.

Miss Myrtle Robson of Vanneck has joined the staff of the New Hamburg Public School.

There are 14 fewer medical schools in the United States than there were a year ago; 1,200 fewer persons studied medicine in 1913 than in 1912; and there was a decrease of 500 in the number of medical graduates, according to figures compiled at the United States Bureau of Education.

Foreign universities are now receiving some of the large private benefactions for which they have long envied American institutions. Cambridge University has recently received $450,000 for general purposes, and $50,000 for a chair of astrophysics; Bristol University has had a gift of $100,000 from one donor, $90,000 from another, and $750,000 from two others; Glasgow has been willed $50,000 for a research lectureship in medicine and $170,000 from three other benefactors; and Leeds has an anonymous gift of $50,000 for the erection of a school of agriculture. In Germany, $2,000,000 has been subscribed for transforming the scientific institutes at Frankfort-am-Maine into a university, and the University of Hamburg is to start with an endowment of $6,250,000. In the case of Hamburg, however, the money has been entirely appropriated by the city.

Under the new regulations issued by the Department of Education pupils can now be admitted to High Schools upon the recommendation of the Principal that the pupil has completed satisfactorily the course of study. This is not intended to do away with written examinations. Where any candidates are admitted to High Schools without a Principal's certificate they shall be required to take the examination as the Entrance Board may direct.

The establishment of a chemical research laboratory at Winnipeg as an incidental feature of the administration of the Grain Act is announced, together with the appointment of Dr. F. J. Birchard, a Canadian, to be director of the establishment. Dr. Birchard has been employed for some years in the laboratory of the United States Department of Agriculture at Washington.

Some disappointment has been felt by those interested in the interchange of teachers between the Mother Country and the over-seas dominions at the action of the Board of Education in sending out notice that it cannot acknowledge the over-seas teachers as certificated. Mr. Goldstone, M.P., one of the secretaries of the National Union of Teachers, pointed out that there was a bar on the Canadian side against British teachers but that he hoped some arrangement might be effected ultimately.

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The Edmonton *Journal* advocates the appointment of an International Committee to prepare a thoroughly authentic history of this Continent.

Under the supervision of R. H. Abraham, of the Department of Education, D. A. Caughill, a schoolboy in Kent, raised 141 bushels of shelled corn from an acre plot. Another boy, John Wilson, raised 136 bushels and 9 pounds. A little girl, Edna Wills, secured 136 bushels, 4 pounds. Each contestant kept records of such things as dates of planting, hoeing, harvesting, husking and maturity.

Alberta has the best percentage of cadets among school children, with 3.42 per cent; Ontario is fifth with 1.96 per cent.

Victor Brodeur, son of Hon. L. P. Brodeur, of the Supreme Court Bench, Charles Beard, of Ottawa, and Sub-Lieutenant Nelles, of Quebec, are the first three cadets from the Canadian Navy to qualify for the Royal Navy. They have just returned to Canada after taking an advanced course in the naval training school at Greenwich, England.

The Canadian cadet team, shooting at Rockliffe rifle range, won the Empire match. Teams from Natal, Transvaal, Dominion of Canada, and the Dominion of New Zealand competed. The Canadian team scored 75 hits, the highest ever recorded in the match.

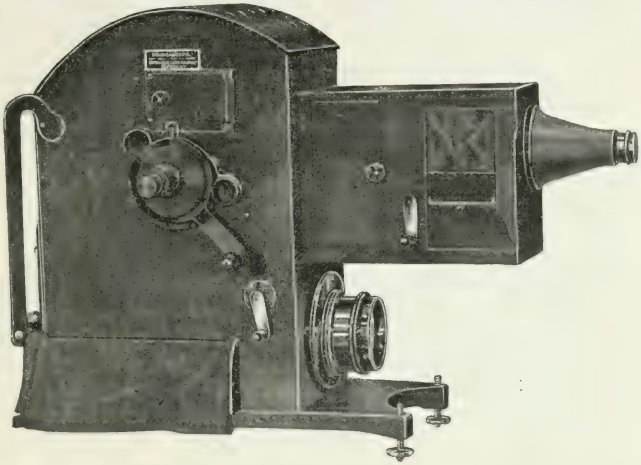
Mr. Wallace Nesbitt, K.C., of Toronto, on behalf of the Canadian branch of the St. John's Ambulance Association, donated five latest-pattern Ross Cadet rifles for separate competitions in each of eight provinces. In the contest just closed the winners of the rifles were: Alberta—Calgary School Cadet Team; British Columbia—Grand Forks High School Cadet Team; Manitoba—Winnipeg Highland Cadets; New Brunswick—St. Stephen High School Cadet Team; Ontario—Galt Coll. Inst., Cadet Team; Prince Edward—Queen's Square School Cadets; Quebec—Church Lads Brigade, Montreal; Saskatchewan—Regina School Cadets.

Following the intimation by Col. Sam Hughes, Minister of Militia, that he would provide instruction and equipment for the students of every Canadian university which would give suitable grounds and buildings for the purpose, Major Leonard has announced that he will provide Queen's University with the grounds and will erect a students' residence for those who will take the training.

The University of Manchester, England, will organise a Faculty of Education for October, 1914. Up to the present there has only been a Department of Education with students in the Arts or the Science Faculty. Only higher research degrees will be granted. This is the first Faculty of Education connected with a British university.

THE "DELINEASCOPE"

A new instrument for projecting lantern slides, photographs, pictures, pages in books, and opaque objects generally.



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NOVA SCOTIA.

The six eastern counties of Nova Scotia held a very successful Teachers' Institute, December 15th to 19th. Inspectors McDonald, MacNeil, Phelan and MacKinnon had the work well organised. About three hundred teachers attended, and good work was done.

The towns of Amherst and Bridgewater are building new and strictly up-to-date High School buildings. The schools in Amherst are growing rapidly. Supervisor Lay assumed charge when the town employed seven teachers. He is still in charge, but with forty-two teachers.

Principal W. A. Creelman of Sydney Academy is beginning an active campaign, through the Teachers' Union, for a general increase of teachers' salaries. He advocates the appointment of a Field Agent who will travel over the province, and awaken a public interest in school affairs. He believes the proper man in the field could educate trustees up to the point of paying a fair price for the services the teacher renders.

NEW BRUNSWICK.

The Westmoreland County Teachers' Institute was held at Shediac, November 25th and 26th. Mr. James Starrak gave an interesting address on "Manual Training as adapted to the Country School", illustrating his address by the use of cardboard and other models. Papers on the following were read and discussed: "What may be expected of Schools in Agricultural Teaching", by Mr. A. D. Jonah; "How to secure Expression in Reading", Miss Mabel Dixon; "Nature and Animal Study", Miss L. Annie Steeves; and a discussion on "Home Study". R. P. Steeves, M.A., Director of Elementary Agricultural Education, was present during the session and gave several very valuable talks on Nature Study and School Gardening. The enrolment of members numbered 115.

The St. John County Teachers' Institute was held in St. John on December 18th and 19th. There was a large attendance of teachers and deep interest was taken in the work of the Sessions. Addresses were given by F. Peacock on "Manual Training in Primary Grades", and R. P. Steeves on "School Gardening". Papers were read by the following: Miss J. Milligan and Principal W. H. Parlee, "Composition", to Primary and Advanced grades, respectively; Miss Gertrude Webb, "Arithmetic"; Miss Tillie MacClelland, "Drawing"; Principal M. D. Brown, "Writing"; A. Gordon Leavitt, "Nature Work"; Principal S. A. Worrell, "Rewards and Punishments". Dr. Carter, Chief Superintendent of Education, and Dr. H. S. Bridges, Superintendent of Schools in St. John, were present and aided in the discussions.

The half-yearly Conference of the Chief Superintendent with the School Inspectors was held at Fredericton on December 30th. Inspec-

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tors Hanson, Hebert, Mersereau, McLean, Dixon, Meagher and Brooks were present, as were also Principal Bridges of the Normal School, Fletcher Peacock, Director of Manual Training, and R. P. Steeves, Director of Elementary Agricultural Education. Some of the subjects discussed were: Course of Instruction, Text-Books, Teachers' Training, Physical Training, Civics, The Teaching of Current Events, Nature Study and School Gardening, Manual Training and Household Science; also the results obtained in the teaching of History, Geography and Composition.

The Text-Book Committee appointed by the Educational Institute held a meeting in the Educational Office on December 29th to consider a course of Literature for High School Grades for next year. A recommendation will be presented to the Board of Education at its next meeting.

The Fisher Vocational School Building at Woodstock is about completed and will be ready for occupancy at the opening of schools in January. The Manual Training and Household Science Departments of the Woodstock Schools will be transferred to this building. The Agriculture Department will also give courses in Agriculture in the same building during the term.

Teacher: "John, give us a simple, descriptive sentence which can be expanded."

John is silent.

Tommy: (whispering) "Teacher is a big fool."

Teacher: (reproving Tommy) "Silence, John will get on to this himself."—*American School Board Journal.*

The teacher had explained at some length the story of the golden calf set up in the wilderness, and then proceeded to question the class of small boys. "What could the women give which would help to make a golden calf?" No answer. "Now, think, what would they wear—what would they wear in their ears, for instance?" Every face brightened, and every hand went up, as, with one voice, they answered in the triumph of full understanding, "Cotton wool, teacher."

A suburban school, just opening, was composed of both city and country children. The teached selected eight boys to debate the subject: "Which is preferable, Country or City Life?"

After they had read many arguments with much enthusiasm, Country John laid down his paper and said: "Mr. President, they don't know what they're talkin' about. The city boy knows nothing about '*going to* town,' and that beats anything I know."

—*American School Board Journal.*

"Woods in June"
By Homer Watson, R.C.A.

Man's true study is of the conditions of human life. The who can best support and use the evil and good things of this life is, in my opinion, the best educated man . . . .

To live is the vocation I would have a man's education train him to. At the end of it he would not be either a magistrate, or a soldier, or a priest, or a lawyer. The would first of all be a man. Everything that a man needs to be he should be able to become as easily as any one else. And let fortune compel him to change his place as often as she pleases, he would always keep his own.

—Rousseau.

The School

"Recti cultus pectora roborant"

Editorial Notes

Ourselves.—The School was founded by members of the staff of the Faculty of Education of the University of Toronto and it is still owned and published by its founders. Since its first issue many writers upon educational questions have shared in its pages. Contributions have come to it from training schools and from all classes of educationists in the various provinces of Canada. Drawn from such varied sources the views expressed in The School may have seemed at times contradictory, or inconsistent with the views held by the training schools of Canada. Once or twice, in fact, The School has been asked how faithfully its pages express the views of its publishers. The School takes this opportunity to state that, apart from these editorial notes, all its articles are signed by their authors, and that such signed articles express wholly and solely the views of those authors.

The Drill Sergeant.—Speaking recently at Toronto in behalf of the Canadian Defence League Dr. McPhail of Montreal referred to the years of the Public School course as 'wasted years' and pleaded passionately for the drill sergeant in the school-room.

Of course, 'wasted years' was a bit of rhetoric. The Public Schools have always been the victims of rhetoric of this kind. And yet they keep busily at work creating in all modern states types of democracies superior to any the world has yet known. Those of us, however, who know and love the Public Schools sometimes grow restive under this rhetoric. Its very cheapness palls!

The demand for the drill sergeant in the school-room cannot be dismissed as mere rhetoric. Many citizens have made, and continue to make, that demand. They say that to save itself every democracy must learn to follow its leaders, and the Public School must teach democracy that lesson. To make men listen and obey is a first duty then of the Public School. Such a duty, they urge, cannot be performed effectively by women, and, therefore, the woman teacher should be eliminated from the Public School.

But there is another side to the question. The physical no longer reigns in the school-room; the spiritual has dispossessed it. Where the spiritual reigns the woman teacher is as much at home as the man teacher. Moreover, a democracy which is formally divided into leaders and followers is not a true democracy; the Public School has no part in such a democracy. And why should the Public School be set the task of training men to listen and obey? Should a whole people be trained only to follow? The right of individual initiative is the crown of our democracy. Individual initiative cannot thrive under restraint. The drill sergeant is out of place in the democratic school-room!

The Old Order Changeth.—A copy of the *Manual Arts Magazine* of December, 1913, printed and published by the boys of the Ottawa Manual Arts School, has come to hand to emphasise the rapidly expanding activities of our state schools. For well-nigh a century common schools and grammar schools were our only state schools. Almost within the last two decades we have created schools for the manual arts, schools for the household arts, commercial schools, industrial schools, mining schools, schools of agriculture, forest schools, sanatorium schools, schools for defectives, etc. Additions to the courses of study and methods have been no whit less rapid and less frequent than additions to the types of schools. Indeed the changes have been so sudden and so far-reaching as to overtax educational revenues and burst the bounds of the old-type training school.

And the end has not been reached. New social movements will demand further additions and changes. These changes will outreach and outweigh the changes of the last two decades. Indeed for the moment old systems of public education seem to be in the melting-pot. What will come out of the pot no man dare prophesy.

The situation calls for the moderate man and the expert. There is no call for the enthusiast who would transfer the Swiss, or German, or English system to Canada, or would uproot the old system to make room for a new one. Nor is the call clear for the man who finds nothing that is good in the humanities and everything that is good in agriculture, commerce and the trades. But less needed than these is the doctrinaire. Like the work of the doctor or lawyer or engineer, the teacher's work has become too highly technical to be entrusted to the theorist. The expert must rule in education.

Teachers and School Nurses.—The school nurses of Toronto are paid better salaries than the school teachers. It is not claimed that the nurses have pursued longer or more expensive courses of training or that they are more highly educated. No one has yet asserted that they are

charged by the state with graver responsibilities. And yet they receive better salaries!

Unable to find the explanation of the difference in the nurse or her work the man-in-the-street is forced to look for it in the teacher or her work. The teacher's work cannot be measured in dollars and cents, and in cases of doubt the ratepayer does not hesitate to underpay. The machinery for training teachers is now very efficient and the resultant supply still very large. Keen competition means lower salaries. Tradition, moreover, has established a low salary schedule for teachers—the lowest among the professions!—and School Boards are not sufficiently in earnest about education to break the tradition. Just here, of course, lies the real explanation. The salaries paid in Toronto or elsewhere measure the popular estimate of the value of the services rendered. Though he shout from the housetops his belief in education and shout it without ceasing, the ratepayer believes in it only to the extent of its cost. He has reason to be ashamed, then, not so much of the salary he pays as of the belief in education of which that salary is an unfailing index.

All this, be it added, is not a proof that the school nurse is overpaid. She, too, is underpaid. All the more so is the school teacher!

The World-old Problem.—The *Steelton News* returns in this issue to the world-old problem of the treatment of teachers. The salaries of Public School teachers are far below their deserving, and far below the salaries of civil servants with less expensive training and less important functions.

The *Steelton News* would solve the old problem in a new way. It would dispense with the services of many civil servants and reduce the salaries of the remainder to the level of their deservings. It would have the Crown distribute the money thus saved as bonuses to teachers.

This plan is a credit to the writer's sympathy with the just claims of teachers, and it looks attractive as stated. But an efficient civil service is a first safeguard of a modern state, and efficiency always demands both adequate service and well-paid service. Moreover any one acquainted with the civil service, especially with the inside service at Toronto, knows that it is neither overmanned nor overpaid. The officials of the Department of Education from the superintendent down, to cite a concrete case, stand at the head of the educational activities of the Province and work as few teachers work, and yet receive salaries that are not above those of the teachers whom they direct. And what is true of the Department of Education is true of the other departments. To raise the salaries of teachers in this way would be to remove one evil by creating another!

Australia presents a simpler if not more practicable way of solving the problem. In an Australian State the Department of Education builds and owns the schools, appoints and dismisses the teachers, determines the salaries and pays them. This centralisation of educational authority has not yet been attained in Ontario. But we are progressing. So persistent and so extensive has been the progress of the last sixty years that the complete supremacy of the Department of Education may be predicted with some confidence. When that supremacy is attained—it may be a generation away or longer—the teacher will come unto his own. In the meantime, let us not lose courage. Thanks to the Department's efforts to eliminate the untrained teacher and to raise the standard of the trained teacher, things are improving. The average annual salary of the male teacher in the Public Schools of Ontario was $436 in 1902 and $767 in 1911 and increased $56 in the last year. In the same nine years the average salary of the female teacher increased from $313 to $518 or $35 in the last year alone.

Book Reviews

Black's Sentinel Readers. Book I, 10*d.*; Book II, 1*s.* 140 pages each. Adam and Charles Black, Soho Square, London. Edited by E. E. Speight. Each volume contains eight full-page illustrations in colour. The selections are not didactic in character, but should be found very useful in imparting moral lessons. These selections may be made a medium, not only of awakening intelligence and imparting knowledge, but of widening the sympathies of boys and girls in all humane directions. If placed in the School Library they will be eagerly read by the pupils, or the teacher may find them useful for the Friday "Story-Hour". These two volumes are suitable for grades up to and including Junior Third.

A Geography of the British Empire, by W. L. Bunting, M.A., and H. L. Collen, M.A. Pages viii+160. Maps, diagrams and 29 illustrations. Price 3*s.* 6*d.* Cambridge University Press. The text describes the geography of the parts of the world in which we are most interested. It is not a mere summary of facts but discusses the relation of man to his environment and the connection between physical features and industries. Canada is dealt with in a very intelligent manner, though the old boundaries for Manitoba, Ontario and Quebec are retained. It can be recommended to our teachers as a valuable book for the school library.

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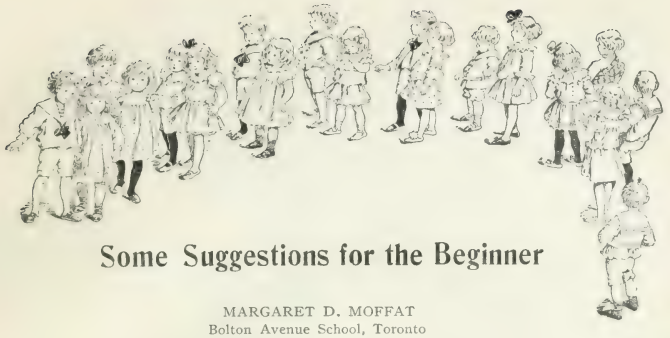

Some Suggestions for the Beginner

MARGARET D. MOFFAT
Bolton Avenue School, Toronto

FROM a Normal Model School to one of the average country schools is a precipitate tumble. It is like learning the rules for swimming from a guide-book and then being suddenly upset into deep water. One teacher says: "After professors and books have done their best for us we have to get to work and stay at work, and work out our own salvation." It does not occur to the young teacher that the Model School is an ideal, or as near it as possible. And she experiences a rude awakening when she confronts the problems of the building, its discomfort and meagre equipment, the parents, the pupils and herself, chiefly herself. If she is a thinking teacher, she will find that she never before knew herself to be such a difficulty. Upon every teacher's private bookshelf should be this book, "Elsie Venner", by Oliver Wendell Holmes. No other writer has spoken so tenderly and understandingly of the school teacher as Dr. Holmes. He pictures Helen Darley, "breathing the hot air of school-rooms, forcing her intelligence to posture before her will as the exigencies of her place required—waking to her mental labour—sleeping to dream of problems—rolling up the stone of education for an endless twelve-months' term to find it at the bottom of the hill again when another year called her to its renewed duties—schooling her temper in unending inward and outward conflicts until neither dullness nor obstinacy nor ingratitude nor insolence could reach her serene self-possession".

There are a few safe rules to keep to in beginning a strange school. Go slowly. Teach a little at a time. Give much practice but not too much at once. Children learn by repetition only up to a certain point. For instance, if they are repeating the spelling of a word, you can tell immediately, if you watch their eyes, when they have stopped learning

that word. Any repetition after that is wasted. Practise watching the eyes of children and, "mit glad feelings", you'll often see the light of understanding spring into them. Put intervals between the practising of different kinds of work, but be sure to return to them or they will be forgotten, no matter how well they were taught at the beginning. When you find that the children have forgotten a lesson, don't scold. Teach it again. This is the common lot of children and teachers.

Follow along the line of what has been done, as nearly as you can discover it, until you know the children and the people, and until they know you. This is important. Avoid doing anything radical previous to their knowing you. Children are conservative. They resent innovations by strangers. One summer I visited a farm where there were two small boys under school age. As I sewed in the shade of an apple-tree on the first afternoon they stationed themselves at a safe distance of several yards from me. To bring them closer I began telling the story of The Little Pigs. "One little pig went down that way." "No, no!" was the applause I got. "One little pig went over that way." "No! no!" more emphatically than ever. I persisted. "The other little pig went up this way." This brought upon me a shower of sticks, stones and codling apples, and I fled to the house for safety. Children prefer the things to which they are accustomed, so new things should be introduced as unobtrusively as possible. Never attempt to put into practice any other teacher's plan until you have worked it over in your own mind so that it becomes part of yourself. At a convention you may hear a teacher telling her plan. You think, "That is good", and try it as soon as you get back to work. You may be disappointed to find that it won't work at all for you.

When you have been in the school a few months and the children have "accepted you", begin combining classes at every opportunity. This provides longer periods when the children have your direct attention, and provides for the accomplishment of so much more work in a given time, and for taking recreative subjects which otherwise would have to be neglected. Some teachers manage successfully three classes in spelling at once. While they dictate to one class, the other class writes a word previously dictated to it and that much time is gained.

Since in the majority of country schools the children sit working for nearly two hours and a half every forenoon and again every afternoon, the teacher's plans are chiefly concerned with seat-occupation and relaxation.

Relaxation.

It is the relaxation periods which are apt to be neglected in the stress of work. Relaxation can take several forms.

I. *Physical Exercise.*—Sometime between nine o'clock and recess at least five minutes should be devoted to bodily exercise. If you don't understand all the commands in the Strathcona exercise book, try to understand some and use them. If your school is like those I remember, on a winter morning you will have physical exercise from nine o'clock till ten, until the room is warm enough to work in. "Running-on-the-spot" is a good warming-up exercise. The children raise heels and run as hard as they can, standing beside their seats. Ventilate the room when the fire is at its best. The change of air will take place quickly and the room can be warmed again easily.

II. *Music.*—Between one o'clock and recess every afternoon have a short singing period. Once every two or three weeks provide time for teaching a new song, by note or by rote, according to your ability. Then it takes only one minute to use it for singing every afternoon. If you can't sing, there is always some girl who can. Get her to learn the song and teach it for you. Plan for the songs just as you plan for other work. It is a great loss to children to go through school-life without learning songs, so great is the moral and aesthetic value of music. Besides, they do their other work the better for the change. I heard a country parent say she regretted so much the loss of one teacher for she taught her boys to sing, and neither of the teachers who came afterwards ever had a song sung in school. There is only one command to give for singing, and that is: "Sing sweetly". Select folk-songs which deal with the history and occupations of a people, something like this: January, an English Song, "John Peel"; February, Scotch, "The March of the Cameron Men";

> The moon has arisen; it shines on the path
> Now trod by the gallant and true.
> High, high are their hopes, for their chieftain has said
> That whatever men dare they can do.

For March choose an Irish song, "The Dear Little Shamrock"; April, nature songs; May and June, patriotic songs; September and October, more nature songs; November and December, Christmas hymns and Santa Claus songs. If in geography you are teaching fisheries and telling the children about the deep-sea fishermen, whose calling is so full of hardship in order that people may be provided with cod, mackerel, herring and haddie for food, what better way is there of impressing it and stirring up in the children a sympathy for their fellow-creatures than to teach the literature of "Caller Herrin'" and then the singing of it?:

> "Buy my caller herrin'—
> They're no brought here without brave darin';
> Wives an' mithers maist despairin'
> Ca' them lives o' men."

And an important point in your method when teaching the cotton industry will be song: "I'se Gwine Back to Dixie", or "Ole Black Joe".

III. *Memorising.*—Set aside one or two fixed periods a week when all the juniors up through the Junior Third may stop work and repeat a poem after you, one verse at a time, till they can recite it. Choose a poem with a great deal of expression in it. This helps the reading.

1. From James Whitcomb Riley: *The Raggedy Man, Winter Fancies, Our Hired Girl, Billy Goodin'* (good for autumn), *The Man in the Moon.*

2. From Eugene Field: *Jes' 'Fore Christmas, The Night Wind.*

3. Isabel Ecclestone McKay, or any other: *A Very Exceptional Esquimau, The Wonderful Fishing of Peterkin Spray.*

IV. *Language.*—When you are among the children, listen for errors in English and jot them down in your note-book: *anythink, ast, dest, I wisht I had, acrosst, my pen's broke.* Jot down all the slang also. Provide a period once a week or once in two, when all juniors may give you their attention, and simply spend the time repeating after you the right forms.

1. Repeat after me: *which, what, when, where, whence, why, while,* throughout a long list you have made for yourself.

2. Repeat: *something, anything, nothing, singing, talking, walking.*

3. Think of a sentence beginning "I saw something . . ." Stand one by one and tell your sentence.

4. Repeat after me:—

My pencil broke. My pencil is *broken.*

My ear froze. My ear was *frozen.*

I tore my dress. My dress is *torn.*

I wore my gloves. My gloves are *worn.*

They spoke the words. The words were *spoken.*

She gave me the book. The book was *given* to me.

They took my ball. My ball was *taken.*

5. Think of a sentence beginning: "I wish I had . . ." Stand one by one and tell it.

Nothing but practice in saying right forms will correct wrong forms of speech. Attack all slang in the same way and *don't* use any yourself. If teachers do not preserve the language, who will? Steer a clear way between street language and a "teachery" vocabulary such as the bombazine lady used to Emmy Lou.

V. *The Teacher's Story-telling.*—Story-telling is of incalculable importance. The reason that children have left school by thousands with no inclination to read afterwards is, without doubt, owing to the lack of story-telling. It is no teacher's fault. The story-telling teacher until recently has been counted a good-for-nothing. By telling a story or part of one in such a way as to excite a child to ask for the book from

which you got it, you have done him or her a good service. Divide your stories into a certain number of history stories, Bible stories, anecdotes of animals, fables, myths, legends and folk-stories. Don't insist on the reproduction of all your stories. Often children take a dislike to them because they are expected always to either re-tell or re-write. Select a few good fairy-tales like Hansel and Grethel and Little Two-eyes. Always read Kipling's stories unless you can memorise them.

VI. *Story-telling or Story-acting by the Children.*—They may re-tell a story you have told or tell one which they read in a picture-book. Tell them to ask their fathers for a true story about something which happened when they were boys; or their mothers for something which happened when they were girls. Hear these on their story-telling day.

VII. *Language or Arithmetic Games.*—Two common games are: (1) A relay adding race. The children are arranged in two or three rows, the little ones in front. Each row is to make an adding sum upon the blackboard. Starting with the first child in the row, each runs and puts down a figure. The last child puts his figure and adds the column. The row whose column is finished correctly first wins. In an ungraded school the older children can stand at the end of the rows and do the adding. (2) A coffee-pot game. One child leaves the room. The school chooses a word with a number of meanings, like *bill* or *box* or *bank* or *bar*. They think of sentences containing their word, but instead of using the word, they say "coffee-pot". The child who left the room is recalled. Hands go up. The teacher names those who may answer. They say: "The butcher sent me a coffee-pot. The bird eats with a coffee-pot. Coffee-pot is a big boy. I had to change a coffee-pot." When the child guesses what the coffee-pot is, another goes out, if there is time for another guess.

The teacher was giving a test on the value of foreign money in America. When it was little Harry's turn, she asked:

"Harry, how much is a guinea worth in this country?"

Harry smiled and answered: "A dollar and a half a day."

The Odour of Sanctity.—Mother—Johnny, you said you'd been to Sunday-school.

Johnny (*with a far-away look*)—Yes, mamma.

Mother—How does it happen that your hands smell of fish?

Johnny—I carried home the Sunday-school magazine, an' the outside page is all about Jonah and the whale.—*Tit-Bits.*

Is Latin a Dead Language?—Tango Tangere Turki Trotum.

The Grosbeaks

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EVERY teacher should become familiar with the grosbeaks. They all display bright colours, are easily identified, and each has a touch of the romantic in its history. February or March is an excellent time to begin observing, as two out of the four species appear only in the winter and even then somewhat erratically.

On a bright, crisp morning in March, as one carelessly looks at the leafless trees he occasionally sees a few sparrows on the branches or perhaps the dainty little chickadee making his routine search in the crevices for his insectivorous food; but who does not stop still with eyes bulging when a whole flock of those beautiful birds, the pine grosbeaks, settle in the branches? These dwellers of the north come down upon us like an apparition every winter. There is no difficulty in identifying them. If you see a bird in size half way between a sparrow and a robin, of a slate-gray colour well washed with raspberry red on the crown, rump and breast, and with a fainter tinge of the same colour distributed with less extravagance in other parts, you may be certain it is the grosbeak. Birds flushed with raspberry-red are not so numerous in the winter that even the novice will have any difficulty in tracing them to the species; so if a flock of birds of the size mentioned is seen and the red breast is detected you are pretty safe in concluding you have seen the grosbeak. If any doubt lingers, look at his beak and the evidence is convincing. I'd rather pass by all mention of the beak. It's like dwelling on the beauties of a charming young lady—the magnificent pose, the sparkling eye, the perfect complexion, etc., and completing the picture by stating that her nose was of the humped-back aquiline description. The grosbeak, with all his beauty, is disfigured with a beak more aquiline than that of the eagle. If this bill is ugly, it's a good identification mark. It is so striking that it gives him his name. I have described the male. The female has as short and stubby a beak as her lord, but alas! the raspberry-red is entirely lacking; however, it is replaced by a modest olive yellow, which, though not so showy, is quite modest and becoming.

This species spends its summer far to the north in both Canada and Europe. There they build their nest, lay their eggs and rear their blunt-beaked family. So far from man and his works are their homes that their eggs are one of the rare prizes of the oologists. Wolley, that enthusiastic egg-collector of England, first found the coveted trophy, but it

was only after two years' search spent in the most northern parts of Finland. As the winter approaches they leave the bleak and barren north and brighten our out-of-doors with their bright colours, their graceful poise and their general sprightliness. What impresses us most is their fearlessness. Unaccustomed to man with his gun and the boy with everything from a sling-shot to a pocketful of stones, they are so confiding that they can be approached to within a few feet. So unfamiliar are they with our "civilisation" that at the sound of a gun in midst of them they remain fixed to their perch or move a little nearer, and it is both disgusting and pitiful to relate that frequently half a dozen are ruthlessly destroyed by the "hunter" without moving from his tracks. It is certainly a slur on our love of and interest in nature that the annual migration of such a striking bird should drive the local and city press to regularly go into hysterics about the appearance of "a rare and almost unknown bird". Every schoolboy should look for its appearance as regularly as he watches for snow and skating.

What brings this attractive creature down amongst us during the bleak winter, when our summer birds have all deserted us for the brighter southern lands with their prodigality of fruits, flowers and insects? It seems to be chiefly attracted by the bright red berries of the mountain ash. These the birds search out and eat with as much gusto as a hungry epicure tosses off a well-fed blue-point. Have you ever tasted these berries? Imagine a concoction of asafoetida, soaked in gall and seasoned with wormwood. To the palate this is to those berries as chicken to crow. Most people would prefer to travel to Labrador or Finland to avoid eating them, but the pine grosbeak covers the distance in the opposite direction to gormandize upon these dainties. Tastes, like talents, differ. These berries have a thin pulp surrounding stony pips like those in the haw. Now our grosbeak seems to prefer the pips to the pulp. It is like choosing between a meal of astringent rhubarb root and tough pine knots, and the grosbeak chooses the latter, and we can't blame him. His short powerful beak is none too strong to grind these hard and solid seeds and thus prepare them to deliver up their nutrition.

As they fly from tree to tree their loud joyous whistle sounds out in the frosty air. We never hear their song. Far to the north in the dark evergreen forests, as the raspberry-red gentleman makes love to his modestly-attired mate the melodious notes of his song rings out in a prolonged melody which quite captivates her heart. They seek out a small conifer and labour together to construct their clumsy nest, for their architectural skill is decidedly limited. Four or five of the daintiest eggs, pale greenish blue in colour, are laid, and in a few weeks a new brood is reared ready to take the place of those ruthlessly destroyed on their southern migration.

This paper would be incomplete without some mention of the evening grosbeak. Its appearance in eastern Canada is well worthy of two space headlines in the daily papers for it is an unusual event. The greater part of its plumage is yellow and black with a white patch on the wing. It has the typical stout beak of its class. This is a western species, being a very common winter bird in Manitoba and the other western provinces. The interesting fact is that occasionally it spreads over eastern Canada and the United States. It has been seen in Ontario as early as 1854; but it was during the winter of 1889-90 that this gay fellow swarmed in great numbers all over the east, so that all had the privilege of gaining an acquaintance. Its tameness was more marked than that of the pine grosbeak and thousands were slaughtered; they were even taken in nets and made excellent cage birds, as do all the grosbeaks. Since that year it has frequently appeared. What leads it erratically away from its natural border? Nobody can tell. The conditions of nature are so complex and so interrelated that a slight and unobserved modification in one part may start a disturbance which upsets the equilibrium in some distant part, and no one could detect the relation between the distantly correlated factors. It may be a scarcity of food, it may be the beginning of a change of habit, but without learnedly discussing the philosophy of the matter, we welcome the change as a means of producing a delightful increase in our winter friends. This bird is a charming creature, and well worth the careful study of every nature student as opportunity presents itself. The cardinal and rose-breasted grosbeak can be more appropriately discussed in a succeeding number of THE SCHOOL.

INTERNAL EVIDENCE.—At a certain college custom ordains that at examination time each of the candidates shall write the following pledge at the bottom of his papers:

"I hereby declare, on my honour, that I have neither given nor received assistance during the examination."

Now, recently it so happened that a young fellow, after handing in one of the papers, suddenly remembered that in his haste he had omitted to write the oath. On the following day, therefore, he sought out one of the examiners, and told him that he had forgotten to put the required pledge on his paper.

The old man looked at him over the top of his glasses and dryly remarked: "Quite unnecessary. Your paper in itself is sufficient evidence. I've just been correcting it!"

New Public School, Oshawa. New Public School, Port Hope.

The Schoolhouse

JAMES A. ELLIS, O.A.A., F.R.A.I.C.

THE preparation of the following paper on "The Schoolhouse" is based on my many years of experience as a specialist in School Architecture. In addition I have quoted from two other authorities on schoolhouse planning, namely, Mr. Wm. B. Ittner, St. Louis, and Mr. Beverly S. King, New York.

The schoolhouse is the greatest and most important workshop in the world. The raw material taken into this workshop consists of children. These little ones are susceptible to diseases of every kind; their bodies and minds are in a stage of development. It is from this tender raw material that the future statesmen, the professional men, the mechanics, the business men, the fathers and mothers of the future are manufactured.

How very important it is, therefore, that the schoolhouse, the workshop, should be as nearly perfect in design, construction, arrangement and sanitation as the most careful modern thought can produce. The schoolhouse, outside and inside, should be as artistic, comfortable and convenient as the best homes in the community in which it is erected. The development of the mind is not more important than the training of the eye, through which may be achieved a higher conception of beauty in nature and art.

Educational buildings should be truthfully beautiful. There should be no sham or imitation of any form. Far better a wooden column that carries its load and frankly tells its story, than an imitation of beautiful marble. The one is sincere and honest; the other is a sham and a fraud, and it always fails to deceive. A child notices details more closely than

an adult. An example of this sort in the formative period of their lives, when impressions received are lasting, will remain a perpetual lesson in deceitfulness to young citizens.

The safety of our buildings is of the utmost importance. Every school building over two stories should be fireproof, and, while all school buildings cannot be erected fireproof, nor is it necessary that they should be to make them safe, if proper construction is employed, it will require but a moderate additional outlay to fireproof corridor, floors and stairways, also the room in which the heating apparatus is housed.

The safety of our building depends on the location of its stairways, corridors and exits, the arrangement and the height of the room, and the site upon which it is located.

Location of the Building. The schoolhouse should be located to make it conveniently accessible to the greatest number, as near the centre of school population as possible. The site should be on high ground, if possible, and away from noise and dust. The importance of proper lighting should demand a large site. After deducting the area of the building, planting and restricted areas, there should be not less than one hundred and fifty square feet of playground per pupil in cities. From six to ten acres would be ideal in suburban communities. On the orientation of the buildings there are some differences of opinion, but in our climate an eastern or western exposure is preferable, as each class-room will receive sunlight during some portion of the day.

Height.—The building should be preferably not more than two stories above the basement. The corridors and class-rooms should be surrounded by masonry walls, thus limiting the fire areas. Stairways should be ample, and located to reduce distance from all class-rooms to the exits, and the exits should terminate at the yard level.

Basements.—The basement should be as near level with the grade as possible, provided with ample window surface, and isolated from the rooms above. There should be playrooms for inclement weather, general toilets and bathing facilities, and, wherever possible, a gymnasium. This story should not be less than eleven feet high, although, where there is no gymnasium, nine feet answers very well. The floor should not be more than three feet below grade.

The boiler and fuel rooms should be cut off effectually and enclosed in masonry walls with fireproof ceiling. If a doorway is found necessary, it should be protected by an automatically closing fire-door.

Next in importance to the stairways and basement is the avoidance of hollow spaces in walls and ceilings, of wood furring, wood lath, sheathed walls, ceilings and wainscotings. Wood finish should be plain with few

mouldings and dust ledges. Doors should be without panels, all woodwork reduced to a minimum, all dark corners and closets eliminated, no doors from class-rooms to wardrobes or cloak-rooms, and a single door opening outward connecting class-room and corridor, and opening in a direct line of travel to exit or stairway.

The advantage of the single door enables the teacher to control the pupils when there is a tendency to panic and to march them to safety. Doors should never open directly to stairways or be hung to obstruct traffic in the corridor. Stairways from upper to ground floors, where practicable, should be inclosed in incombustible materials with fire-protected openings.

Stairways.—Stairways in proper number should be provided, and no stairway should be more than six feet in width. They should be in two runs from floor to floor; should have broad landings and a hand-rail on both sides. The location of stairways is very important. They should be arranged to serve definite groups of rooms with direct line of travel from class-rooms. In this way a natural division of pupils is formed and congestion avoided.

The number of stairways and exits to a school building is a matter of calculating the persons and floors to be served in an individual building, and all that can be given is a rule suggested by practice, namely, that 120 persons in line, two abreast, can pass a given point in less than one minute. Risers should not exceed 7 inches, and the tread should be 12 inches, and should have a non-slipping surface. In the matter of stairways and exits, what is customary by the pupils a number of times each day will always prove the most efficient means of egress in case of emergency.

Corridors.—The importance of the corridors in the planning of school buildings is often overlooked, and the width and lighting sacrificed in the interest of class-room space. They must be wide enough to prevent congestion, and in a general way corridors 12 feet wide may be taken as a minimum. Corridors in High Schools should be not less than 14 feet. Well-lighted corridors offer the best means for decoration with pictures, casts and mural paintings. The educational advantages of these influences cannot be over-estimated. Corridors should not be lined with lockers.

It is better to place class-rooms in one side of the corridors only, giving direct outside lighting. "This is the prevailing custom in Germany, while in both Canada and the United States the general practice is to flank both sides of the corridors with class-rooms and depend on transoms and end windows for light. The latter custom gives a more compact and economical building, but it is accomplished at the sacrifice of proper

lighting and attractiveness, and is one of the weakest points about our ordinary school plan.

Class Units.—A school building consists of a number of class units grouped around corridors and stairways. The first step to be taken, therefore, in planning a new building, is to determine the size and number of these units. Great stress has been placed by early authorities on the cubic feet and floor space per pupil, and class-rooms were thus proportioned. Through the introduction of mechanical ventilation, this has given way to a practice where the number of pupils to be accommodated, style of furniture to be used, and the proper lighting of the rooms are the factors in determining the size. However, as many of our school buildings are still ventilated by the gravity system, it is good practice to allow 15 square feet of floor space and 250 cubic feet of air per pupil.

The number of pupils per room is constantly decreasing, and where fifteen years ago it was not uncommon to find as many as 60 pupils per teacher, the number to-day is from 40 to 50. A room 24 feet wide and 32 feet long will seat fifty pupils at single desks, giving proper width for the aisles, space for teacher's desks, a table and other furniture at the teacher's end of the room.

The width of the room, where unilateral lighting is used, should never be more than twice the distance from floor to window-top, and where the outside conditions are favourable, this width will be found too great.

The height, then, should be sufficient for good lighting, but no more, as added height increases the cost of both construction and maintenance. Experience has shown that a height of 12½ to 13 feet for a room 24 feet by 32 feet will permit of the proper glass area and may be taken as a standard. The glass area depends to some extent on the location of the class-room.

A northern exposure requires more area than a southern or western exposure. The former may require one-fourth of the floor area, while in the latter case one-sixth of the floor area may give proper lighting. The story height, therefore, should receive careful consideration. Kindergartens should receive the morning sun and should be carefully planned.

Proper lighting of the class-room is especially important. The light should come from the longest axis of the room, and always over the left shoulder of the pupil. The light should be as unbroken as possible, so as to avoid cross-lights and shadows. One-fourth of all educated people on this continent suffer from disturbance due, more or less, to eyestrain and its numerous indirect effects. The most serious injury to children massed together in schools is the result of imperfect seating, lighting, ventilation, and sanitation.

Cloak-Room.—The cloak-room is generally located at the end of the class-room, nearest the door leading to the corridor, and is formed by placing a screen about 9 feet high, having two openings 3 feet 6 inches wide and 7 feet 6 inches high. The cloak-room should have a separate foul air duct to the vent flues.

Auditorium.—Every school building of four rooms and up should have an auditorium. Where funds will not permit, a good substitute can be arranged by placing either sliding doors or rolling partitions in the wall between one of the class-rooms and the main corridor. The cost of this arrangement is very small and the result very satisfactory.

Ventilation and Vacuum Cleaning.—The importance of proper ventilation cannot be over-estimated. In order to ventilate a class-room properly, from 25 to 30 cubic feet of fresh "properly tempered" air should be supplied to each pupil per minute: that is to say, there should be fifteen hundred cubic feet of air withdrawn from a room that is occupied by fifty people, and an equal amount introduced, every sixty seconds, in order to preserve a reasonable degree of atmospheric purity.

The disease called "cold" is often caused by impure air and lack of exercise. Influenza and colds are contagious. The evil of close atmospheres is largely the result of elevated temperatures, humidity, and absence of air currents. Tests have been made on men who sat in impure air, but breathed pure air through tubes, and they presented all the symptoms usually resulting from bad ventilation.

Air baths are as important for bodily health as water baths. Air is never free from dust impurities; it is estimated that country air carries 2,000 dust particles per cubic centimetre; city air, 3,000,000; and inhabited rooms, 30,000,000.

The importance of vacuum cleaning is established by the following results: In a clean hospital ward, where air was agitated by dry sweeping, the number of colonies of bacteria collected on a given exposure rose from 26 to 532, the effect of ordinary broom sweeping.

She was a young lady teacher, but she had very early acquired the characteristic attitude towards others, even towards the young man to whom she was known to be engaged. This young man was observed leaving her house one Sunday afternoon and looking pensively at a ring in the palm of his hand. "The engagement isn't broken off, is it?" asked the friend who met him. "It is," he said. "I was half an hour late in calling, and she said I must bring an explanation signed by my mother."

Insect Galls in Relation to Field Work in Elementary Science

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IN the regulations of the Education Department, dealing with the field work in Elementary Science, topics are not stated but the instructor is at liberty to plan the course as he wishes. He is now free to allow a student to follow out any particular line in which he may have become interested; for as long as the naturalistic instincts are stimulated the purpose of the course is fulfilled. With the teacher suggesting the subjects for outdoor study, these will be as far as possible along the lines of the scientific interests shown by members of the class. But since the impulse to imitation inclines the students to become interested in the investigations of the teacher, he is better to have several scientific field hobbies, not that he requires to be at a very advanced stage in any one of them, but that he should have received infection from as many as possible.

In several ways the deformities on plants, known as insect galls, present a suitable subject for field work. Since their production involves a stimulus by an insect parasite and a response by a plant host, the study of them discloses observational lines in both of the departments of biology. They are so widely distributed throughout Ontario, and so plentiful wherever found, that they attract the attention of the most unobservant. The golden-rods of the meadows and fence rows are deformed by several different species, while the willows bordering the water courses and the oaks in our parks and woods furnish hosts for many equally common forms. As well as their abundance, the strange shapes and bright colours of galls make them conspicuous objects. The spherical rosy-cheeked apple gall, *Pontania pomum* Walsh, and the Hedgehog gall, *Philonix erinacei* Beut., with its faceted surface and pink-tinted trichomes, are often noted on field excursions.

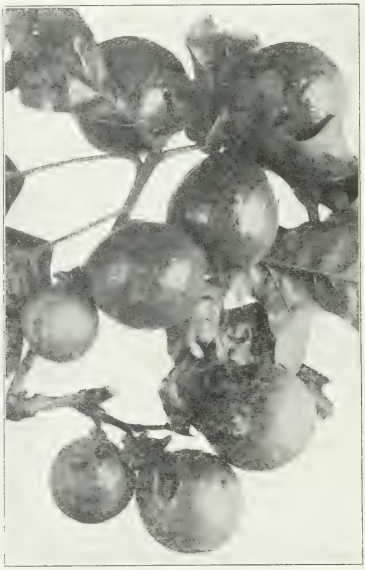
In collecting the various species and keeping a record of the host plants, the student unconsciously receives valuable training. The material requires little preparation to make it suitable for the cabinet. The majority of the leaf and all of the stem galls are so firm in texture that they shrink very slightly during the drying process. The natural appearance of even the more succulent forms can be preserved if dried under light pressure. As a consequence, the whole of the student's

energy is not expended in the technique involved in the preparation of his specimens as so often happens in the making of other collections. In the listing of the various plants from which the galls were obtained, the collector will notice the restriction of certain forms to definite hosts, and is thus furnished with an additional clue to the identification of doubtful species of plants. Among the oaks he soon associates the spongy oak apple, *Amphibolips confluens* Harris, with the black oak, *Quercus velutina* Lam, and the Bullet gall, *Holcaspis globulus* Fitch, with the white oak, *Quercus alba* L. Or in the *Salicaceae* he finds the heart-leaved willow, *Salix cordata* Muhl, bearing the Pine Cone gall, *Rhabdophaga strobiloides* Walsh, and the Cottonwood, *Populus deltoides* Marsh, the Vagabond gall, *Pemphigus vagabundus* Walsh. The record of the host plants will furnish many other such examples, extremely useful as marks of identification, in the case of hosts on which the galls remain throughout the winter.

There is perhaps no collection of natural objects that can be utilised by the student to a greater extent than this one. As a consequence he receives the correct impression concerning the purpose of cabinet specimens, that their value lies in the use rather than in the storage of them. While from the botanical aspect the investigations of the junior pupil are ended with the collecting of the galls, from the entomological they have only commenced. Interest in this new phase of the subject is aroused by the emergence of insects in large numbers from the specimens.

In the rearing of the inmates from the different galls many valuable points connected with the life histories of the insects will arise and a large field for investigation is opened up, since gall producers are found in all the chief orders of insects, Hemiptera, Diptera, Lepidoptera, Coleoptera and Hymenoptera. Among the Hemipterous forms is the unfortunately too common, *Chermes abietis* Chol., a pest that has established colonies on almost every hedge of Norway Spruce in the province. There is no species in the order Diptera that more commonly attracts the attention of the nature student than the Pine Cone gall, *Rhabdophaga strobiloides* Walsh, so often mistaken for the fruit of the Salix host. Quite as common a type in some localities occurs on the same host; the producer is *Rhabdophaga triticoides* Walsh. The specific name is, in this case, particularly happy since the shortening of the stem axis and the consequent crowding of the lateral buds give a decided resemblance to a head of wheat. So many producers will emerge from these galls that the Dipterous type of insect has a reasonable chance, from its frequent repetition, to become fixed in the student's mind. The Lepidopterous gall producers furnish many suitable facts for the stimulation of the powers of observation. The large elliptical gall, produced low down on the stem

of the golden-rod, is particularly interesting. The preparations made by the larva to enable the moth to leave the gall will awaken scientific curiosity unless it is hopelessly dormant. The most casual examination of the mature gall reveals the aperture of exit closed by a plug of silk so tapered that it can be easily forced out from within but cannot be moved readily in the opposite direction. The neatness with which this cork fits is due to the smoothing over, with a silk preparation, of the rough edges left by the larva in gnawing out the opening. This activity of the larva in the promotion of the welfare of the imago appears all the more



Amphibolips confluens Harris
Spongy Oak Apple.

Reproduced by special permission of William Beutenmüller, New York, from the author's edition of "The species of Amphibolips and their Galls," (American Museum of Natural History), Vol. 26, Art. 6, 1909.

striking when contrasted with the general rule among insects of the adult providing for the needs of the larva. The only Coleopterous galls, numerous enough in this locality to be likely to attract the attention, are the almost spherical stem galls produced on the branches of Red pine, *Pinus resinosa* Ait., by the snout beetle, *Podapion gallicolla* Riley. Many species of gall insects in the order Hymenoptera, family Cynipidae, are

furnished by any oak grove. From the two species of large "oak apples", and many other commonly occurring forms, producers can be reared without difficulty. These gall wasps show none of the irritable temper of the common forms and can be examined with much less expenditure of nervous energy. Many species will readily oviposit in buds on twigs held in the hand or placed in beakers containing water under bell jars. Scarcely any willow tree or shrub can be found that does not supply a host for sawfly gall producers. During the months of May and June, these insects cut slits in the leaves of the opening buds and deposit an egg in each wound. These eggs can be found still unhatched in the well-grown gall, since in this family of the order Hymenoptera the host is stimulated during the act of oviposition. This is in marked contrast to what occurs in the Cynipidae family of the same order, where the abnormal growth does not commence until the larva has broken through the egg membranes.

The following list contains some common galls that frequently attract the attention of pupils on field trips.

Order Lepidoptera.

Eucosma scudderiana Clemens. (Upper Golden-rod Gall.) Hosts *Solidago canadensis* L. and *Solidago serotina var. gigantea* Gray.

An elliptical gall produced near the top of the stem among the branches. The producer emerges in June after wintering in the larval form.

Gnorimoschema gallaesolidaginis Riley. (Lower Golden-rod Gall.) The hosts are the same as in the preceding species. The gall is similar in appearance to the Eucosma genus, but is produced on the lower half of the stem, as a general rule. The producer emerges in August, and winters in the imago form.

Stagmatophora ceanothiella Cosens. (New Jersey Tea Gall.) Host *Ceanothus americanus* L. An elliptical stem gall on the New Jersey Tea. The producer passes the winter in the larval state and emerges in June.

Order Diptera.

Rhabdophaga triticoides Walsh. (Willow, Wheat Head Gall.) Host *Salix cordata* Muhl. A terminal gall produced by a swelling and shortening of the stem of the host.

Rhabdophaga batatas Walsh. (Willow, Potato Gall.) Host *Salix humilis* Marsh. A nodule-like swelling of the stem of the host. Very variable in size and shape.

Rhabdophaga strobiloides Walsh. (Pine Cone, Willow Gall.) Host *Salix cordata* Muhl. A top-shaped mass of leaves, produced by a

shortening of a stem of the host, constitutes the principal mass of this gall.

Rhabdophaga rhodoides Walsh. Host *Salix humilis* Marsh. As in the preceding species, the gall consists of a terminal mass of leaves, but in this case these have a much looser and less regular arrangement and form a larger bunch.

In order to obtain the producers of the four species of Rhabdophaga mentioned, the galls should be collected in early spring as the insects emerge in time to oviposit in the opening buds.

Order Hymenoptera—Family Tenthredinidae.

Pontania pomum Walsh. (Willow, Apple Gall.) Host *Salix cordata* Muhl. A large, globular gall originating from the leaf of the host. It is greenish-yellow in colour, usually with a rosy tint on one side.

Pontania crassicornis Rohwer. Host *Salix humilis* Marsh. Resembles the preceding species in shape, but is considerably smaller. It is densely pubescent, and several are crowded together on one leaf.

Pontania pisum Walsh. (Willow, Pea Gall.) Host *Salix discolor* Muhl. An almost spherical, pea-like gall, with a small point of attachment to the leaf of the host.

Pontania hyalina Norton. Host *Salix alba* L. On an infected leaf many galls are produced in two parallel rows, one on each side of the midrib.

Pontania lucidae Rohwer. Host *Salix lucida* Muhl. This gall consists of an enlargement of the petiole or midrib of a leaf.

The producers of the sawfly galls listed above can be obtained by collecting the infected leaves just before they fall in the autumn and placing them on earth in breeding jars. If these are kept in a cool place during the winter, the larvae will pupate in the soil and emerge in the spring.

Order Hymenoptera—Family Cynipidae.

Amphibolips confluens Harris. Host *Quercus velutina* Lam. **Amphibolips inanis** O. S. Host *Quercus rubra* L. These species are the common, large "oak apples". While very much alike in external form, the parenchyma zone in the former consists of a dense mass of interlocking fibres, while only a small number of delicate straight strands constitutes it in the latter.

The producers of these species of the Amphibolips genus emerge late in October.

Holcaspis globulus Fitch. Host *Quercus alba* L. **Holcaspis mamma** Walsh. Host *Quercus macrocarpa* Michx. The so-called "bullet galls" resemble each other very closely. The former species is

spherical in shape while the latter differs from it only in ending in a short tapering point.

Records of the dates of emergence of the producers give *Holcaspis globulus*, October 31st, and *Holcaspis mamma*, November 1st.

Philonix hirta Bassett. Host *Quercus macrocarpa* Michx. A spherical gall originating from the midrib of the leaf; its surface is faceted in appearance.

Philonix nigra Gillette. Host *Quercus alba* L. This species is also spherical in form, but the surface is felty in appearance, due to a dense pubescence.

Philonix erinacei Beut. Host *Quercus alba* L. This species, which is commonly known as the "hedgehog gall", is usually ellipsoidal in shape, springing from the midrib of the leaf. The surface is again in this case faceted, but each facet terminates in a distinct trichome.

The producers of the first and third species of this genus emerge about the beginning of November, but the galls of the second lie on the ground over winter and the insects appear early in the spring.

Rhodites multispinosus Gillette. **Rhodites globuloides** Beut. Host *Rosa blanda* Ait. The galls of these species consist of a more or less regular spherical swelling of the stem of the host. The former is exceedingly spiny while the latter is smooth on the surface.

Dates from cabinet specimens, of emergence of producers—*R. multispinosus* Gillette, May 5th. *R. globuloides* Beut. May 25th.

LITERATURE USEFUL IN IDENTIFICATION.

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The incumbent of an old church in Wales asked a party of Americans to visit his parochial school. After a recitation, says the Youth's Companion, he invited them to question the pupils, and one of the party accepted the invitation.

"Little boy," he said to a rosy-faced lad, "can you tell me who George Washington was?"

"Iss, sir. 'E was a 'Merican general."

"Quite right. And can you tell me what George Washington was remarkable for?"

"Iss, sir. 'E was remarable 'cos 'e was a 'Merican an' told the thruth."—*American School Board Journal.*

Biography in History.

"TEACH history through biography" is a statement often heard by teachers in connection with their teaching of history, and while the statement gives good advice, it is liable to be misconstrued. It may be understood to mean that biography is history, and that when teaching the ordinary events in any person's life, one is teaching history. Such, however, is not the case—biography aids in history teaching, but is not history. History deals with the progress in or growth of the institutional life of a nation, and is concerned with the biography of a person only in so far as this person has helped or hindered such institutional progress.

In the institutional life of a nation, there will be found five well-marked phases, each with a central organisation, viz.: political, whose organisation is the government; religious—the church; educational—the school; social—society, and industrial—commerce. The advance in these institutions indicates the progress in the thoughts and feelings of a people. Some person of a stronger character than his fellows becomes possessed of an idea, and in his efforts to secure its accomplishment implants the idea in the minds of others. They, recognising the value of it, embody it in the advancement of one or more of the institutions of their national life. The originator of the idea then becomes famous in history, and his biography is of value to us. In his life, however, there may be episodes having no connection with the idea mentioned before, and thus of no value as history.

These two points will indicate to the teacher the need of a knowledge of history sufficient to grasp the prevailing ideas that marked the growth of a nation during a particular period, and to select biographies suitable for use in presenting these ideas to the pupil. The teacher, in making selections for the Junior classes, should be guided also by the interests of the pupil. We are told that biography appeals to the pupils, but this will not be the case unless the pupils have an interest in actions like those of the person portrayed. An example may make this clear—a teacher selects the biography of Watt as suitable for a lesson in history to a Form II. in a factory town, doing so because in Watt's invention of the steam engine he embodied an idea that marked an important advance in industrial progress, and also because the pupils in that class are interested in the machinery of the local mills, and possibly because boys at that age are much interested in mechanical toys.

Not only should the teacher exercise care in the selection of the biography, but also in the elimination of those parts of it that are not concerned with the particular influence contributed by the person under discussion, e.g., in the biography of Drake there are many unimportant details in his struggles with the Spaniards that should be omitted, and emphasis placed upon his voyage around the world with its resulting effects on discovery, colonisation and commerce. The pupils in the Junior classes are not able to discriminate between the important and the unimportant details, hence the teacher should select and arrange for them. The following outline is suggested as a guide:—

1. Incidents in the early life of the person—those that have influenced later action.
2. Education or preparation for future work—if this had any particular bearing upon it.
3. Any trait of character influencing the later activities.
4. The work (idea) for which the person is noted.
5. The result of this work upon some phase of institutional growth.

The biography of Columbus may be given as a typical one since some of his biography falls naturally under each of these headings, while in that of Cartier the first two may be omitted.

The method of dealing with the biography in class is accountable for the feeling or attitude that the pupil will have towards history. It has been noted that children are very much interested in personal stories (fictional) and yet not so interested in those that are real (history). The bare facts of biography are not interesting to pupils unless told in an interesting way, with something of the romantic suggested in the telling. The teacher who stands before the class repeating the bare facts of biography is not implanting a love for history reading. She should so enlarge upon these, so clothe them with the personal element that the person seems actually to be doing what the teacher is describing.

This reality can be greatly increased by the use of pictures, by making sketches upon the blackboard, by constructing with plasticine, etc. Many teachers in using the picture, hold it in the hand a few moments, then place it upon the desk and go on with the narrative, not considering that the removal of the picture removes considerable of the reality. The following device may be helpful in overcoming this. A stand of some kind is secured and sheets of millboard fastened to it so that the sheets stand out like the leaves in a book, and can be brought forward or folded back. Pictures to be used are mounted on these sheets. For the story of Columbus, which will be used later as an illustration in method, the pictures may be secured from the Perry Pictures Co. They should be mounted in order of occurrence, beginning with that of Columbus and ending with that of his death. Mounting the pictures in this

way preserves them, places them in a convenient form for illustration, and afterwards serves to recall and impress the facts related in connection with them.

The method of narrating the events in the life of Columbus, endeavouring to make it real, will be illustrated in the accompanying brief outline of a plan used to teach the biography of Columbus to a Form II (ungraded school). K.

Outline Plan of a Lesson on Columbus

Aim.—To give pupils a clear idea of the work of Columbus in relation to the world's progress. (Suitable for Sr. II., or Jr. III.)

Preparation.—Pictures mounted, and a black globe. Upon the black globe is drawn an outline map of the known world of 1492.

Introduction.—With the picture on the stand before the class and the black globe convenient, the teacher introduces the lesson by questioning upon the known world of the 15th century, requiring pupils to indicate on the globe each part mentioned in their answers. This is followed by suggestions by the pupils as to what the people living in the western part of the Old World thought existed beyond their view in the western ocean. After the pupils have given their answers, the teacher adds some of the current opinions of Columbus' time, and ends this by saying that not all accepted these views—that some thinkers had already believed that the earth was round, and that one in particular was confident in this opinion—and here introduces Columbus, making the introduction personal by reference to the picture.

Presentation.—As the early life and education of Columbus has a connection with this story, the teacher briefly relates this, comparing it as much as possible with the lives of the children in the class.

Reference is then made to the characteristic persistency and thought of Columbus, and from this the teacher passes, in narration, to the various ways in which Columbus attempted to procure the necessary means to test the correctness of his idea—the actions of the King of Portugal—those of Ferdinand and Isabella—the appearance before the council at Salamanca—the intercession of the priest, and finally, Isabella's goodness in pledging the amount necessary to equip the three ships. (The pictures illustrate each of these scenes.)

2. The matter indicated in the preceding step may be sufficient for one lesson period. If so, no revision of the story is made, but before the next history lesson in which the voyage of Columbus is discussed, a language lesson may be taken upon this topic in which a description of each of the pictures would aid.

3. In the second lesson period the description of the voyage is given, illustrated by the pictures of the departure and incidents of the voyage, by sketching on the black globe the route traversed, by the insertion of the Canary Islands, the Saragossa Sea, the Island of San Salvador, and finally, the group of the West Indies.

The description given by the teacher can be made more emphatic by the use of problem questions inserted in the narrative; e.g., What would you have done when no land could be seen after twenty days? Had you been Columbus, how would you have dealt with the mutineers?

4. The preceding step will also require a lesson period, and revision may be made by oral or written language, but before doing so the pupils should be given an opportunity to read a full story of Columbus in "Ten Great Events in History", "Highroads of History", etc.

5. In the following history lesson period a review by questioning will detect and remove any wrong ideas received in the previous lessons, while an outline with topical phrases on the blackboard will arrange the facts in a united group. A short discussion of the results of this discovery by Columbus should be held, both pupils and teacher contributing to the discussion.

For desk work the blackboard outline will form the basis for a written reproduction of the story, regarded more as a language than a history lesson, i.e., more stress placed upon the manner of describing than upon the facts in the description. K.

"The Coming of the White Man"
By G. A. Reid, R.C.A.

Township Boards

WILLIAM PRENDERGAST, B.A.
Normal School, Toronto

MORRISON township lies just across the Severn River in Muskoka district. The Severn is the frontier of summer settlements. Morrison, with its stretches of good agricultural land and chains of pretty lakes, is the connecting link between the streets, where city people work, and the vast area of highlands where they play. But Morrison township has another distinction; it was one of the six that originally adopted the Township School Board system, and it is the only one in which it still exists. For nearly forty years, for better or for worse, a Township Board has managed its schools. In the early history of the township when the settlements were thin and far apart, some children found themselves at very great distances from the schoolhouses then built. In 1875 a Township Board was formed in order that more school houses might be built, and the expense of doing so laid on the township as a whole. I may add that the people of Morrison are satisfied with their system.

As early as 1850 provision was made in the School Law of Upper Canada for the establishment of Township Boards. If every section in a township declared at its annual meeting in favour of a Township Board, it was the duty of the Township Council to enact a by-law providing for its institution. Some years later the law was changed so that a favourable vote from a majority of the sections was sufficient to order a change. But it was not until the sixties that Dr. Ryerson grew really enthusiastic and earnest about it. He was undoubtedly influenced by the experience of some States in the neighbouring Republic. Massachusetts, Ohio, Pennsylvania and Indiana had tried the experiment, and their officials were full of praise for it, although at this date some of the reasons given then look somewhat tenuous. In his tour through the Province in 1865, the Superintendent advocated the Township Board system at the Teachers' Conventions which he addressed, and to a few County Councils which he met. His original idea was that the Township Council should administer the schools; that idea he modified later. Twenty-five Teachers' Conventions which he addressed that year adopted resolutions favouring the proposed scheme; the teachers were easy to convince, they probably believed it would improve the schools,

but the parents were never fully persuaded, and the Township Board system never really took hold in Ontario. Only six townships—Enniskillen in Lambton County, Tuckersmith in Huron, McKellar and Christie in Parry Sound, and Morrison in Muskoka—adopted it, and all but the last discarded it after a trial. The system was established in Tuckersmith in 1875, and discontinued in 1889. One of the objections to it was that it compelled the ratepayer in the large section to help to support the small school; another was that there were always some schoolhouses near which no trustee resided, and consequently for which no trustee was available when repairs were urgently or promptly needed. I suspect however, there were other reasons. The system tended towards loss of local self-government, and it robbed citizens of the privilege of holding office. We in Ontario are unable to make a distinction between holding office and serving the State. We have an aversion to decreasing offices, whether it be in the government of the Dominion, of the Municipality, of a fraternal organisation, of a social club or of a professional association. It was this traditional love of offices—so common among people who boast of their democracy—that killed the Ryerson scheme.

G. W. Ross accomplished in another way one of the purposes which the Township Board was intended to bring about. The township grant, which has been part of Ontario's financial scheme for many years past, tended to equalise the cost of supporting the schools of the township and to put upon the big section part of the burden of the small school.

The writer of an article in the November SCHOOL quotes some advantages that would accrue to the rural school of to-day under a township system of trustees. These advantages are for the most part theoretical, or at least the securing of them is not dependent on the existence of a Township Board. There is nothing worth while that a Township Board could give a rural school at present that it cannot get under the system of section trustees.

The rural ratepayer as I know him will never give up the local government of his school for the sake of the advantages mentioned, some of which he regards as remote and unimportant, and all of which he could obtain under the section trustees. There is in my view no use at this date in advocating Township Boards under present conditions; better accept what did happen than "what gracefully, deliciously or sublimely ought to have happened".

Whether or not a Township Board would be a good means of administering a Consolidated School system is a different question. If the Consolidated School should be favourably received in Ontario, Township Boards would preclude the possibility of remnant sections being left over. The township would be a convenient unit to use in forming Consolidated Schools. On the other hand, there would obviously be an

advantage in the use of a smaller unit, say, two or three sections; new ideas grow slowly, and it might be easier for two or three sections to unite in forming one Consolidated School than to get a whole township to adopt the Consolidated School idea. Possibly the Township Board may be used in the future to administer an entirely new elementary school system, or a very radical departure from our present one, but it is not ever likely to become part of our present system.

Book Reviews

Arnold's Junior Geography, by W. S. Carey. 162 pages. Price 1s. Gives a general survey of the position, surface, climate and natural resources of each continent as a whole, followed by a more detailed account of its political divisions. A great deal of useful topographical data is given. The sketch maps and diagrams are very clear.

A Shorter Algebra, by W. M. Baker, M.A., and A. A. Bourne, M.A., formerly Head Master and Head Mathematical Master, respectively, of Cheltenham College. 320 pages. Price 2s. 6d. G. Bell and Sons. This is a matriculation algebra, and covers practically the same work as Hall and Knight's Junior Algebra, with the addition of the Progressions. Examples for revision appear at frequent intervals, and specimen examination papers are added at the end of the book. The subject of graphics is introduced early, and is extended to cover cubic equations. The equation is first treated on page 47. The whole book is evidently the result of much forethought on the part of the authors, and it should be welcomed by all teachers who feel the need of a supplementary textbook. G. A. CL.

Recits et Compositions d'apres l'image, par M. Anceau et E. Magee, illustre de 14 planches en couleurs. 33 pages. Price 6d. Published by Messrs. Adam and Charles Black, Soho Square, London, W. This little book contains 14 full-page "planches" (coloured pictures). Planche V, for example, is entitled "Place du Theatre Francais, Paris". On the page opposite there are two "Anecdotes sur Moliere", followed by five exercises, e.g., (*a*) Questions on the anecdotes to serve as a basis for conversation in French. (*b*) "Mettez au masculin: sa vieille servante", etc. (*c*) Racontez la derniere histoire comme si vous etiez le mendiant", and so on. A vocabulary is appended. The book "is intended for the use of pupils who have learned according to the direct method, and who have an elementary knowledge of Grammar". It gives practice both in reading and composition, which it offers in an attractive way. It should be a valuable class help in the hands of a teacher who emphasises the direct method of teaching languages in school, and contains many good suggestions, also, for an advocate of the grammar method. J. B. W.

Little Journeys to Rural Schools

F. H. SPINNEY
Principal, Alexandra Public School, Montreal

VII.

MISS Enfield had divided her pupils into four groups—designated as First, Second, Third and Fourth Class. The Fourth Class included the pupils of grades corresponding to the Seventh and Eighth of graded schools.

The first period in the morning was devoted to arithmetic. The Second, Third, and Fourth Classes were working examples that the teacher had placed on the board before the opening of school. The First Grade pupils were sent to the board for a lesson in addition combinations.

"Harry, you write the combinations that make 7; Mary, 8; Frank, 9; Wilfred, 10; Jennie, 11."

Harry wrote:—

3	2	1
4	5	6
—	—	—
7	7	7

Jennie wrote:—

6	7	9	8	10
5	4	2	3	1
11	11	11	11	11

The teacher marked the "set" that had the neatest figures, and also the "set" that was finished first. Then each pupil was assigned the next higher number and the same operation was repeated.

The teacher then mixed the combinations in the following manner:—

2	5	6	9	8	7	5	4	3	2
9	9	7	4	5	2	8	4	9	9

and the pupils were asked for the answers, as quickly as they could be given.

"Now for some rapid addition", she said; and she placed on the board these columns:—

10	5	2	3		
10	5	2	3		
10	5	2	3		
10	5	2	3		
10	5	2	3		
10	5	2	3	4	
10	5	2	3	4	6
10	5	2	3	4	6
10	5	2	3	4	6
10	5	2	3	4	6

The children did this "rapid addition" with apparent delight. The teacher explained,—"When the children are doing this work with so much life and pleasure, I tell them that good attention and plenty of practice will enable them to add all numbers just as rapidly; thus they have established in their minds an *ideal* in the matter of rapid arithmetic."

This is good philosophy put into practical application. When we attempt "rapid work" in advance of the child's natural development, there results more discouragement than progress. Sometimes we are so fully imbued with the idea of fitting children to be successful adults, we lose sight of the idea that it might be well to make sure that they are first *successful children*. If a boy properly fulfils the functions of childhood, his manhood is quite likely to take care of itself. Let us, as teachers, realise that our highest purpose is to see that the children properly fulfil the functions of childhood.

There followed one of the most interesting and most carefully planned exercises that I have ever observed in a miscellaneous school. The pupils of the highest grade handed in their written work in arithmetic to the teacher; the pupils of the lower classes handed in theirs to the pupils of the next higher class. When the marking was completed, the hardest problems were worked and explained by the pupils. The teacher did as little as possible. Sometimes we make the mistake of supposing that the most showy performances on the part of the teacher constitute the best teaching. Such activity may be very beneficial for the teacher, but it has little benefit for the children. Children *learn most* when they are *active*, and learn very little when merely watching the activity of others. Wise direction of children's activity represents the best kind of teaching.

"Is this examining and marking always done in such an orderly manner?" I asked the teacher.

"Yes, since the children have been led to understand that their real success depends upon how they work, and not upon how large a mark they get. That was a hard proposition to prove, but I think that they are all quite ready to accept it now."

Miss Enfield was ranked as a most successful teacher. I based the secret of that success on her preparation of each day's work. Not that she planned out any "brilliant lessons", but rather that she planned how to fill the time with the most interesting work on the part of the pupils. The good teacher is a leader, and a leader's best qualification is the ability to direct other people in doing good work. If the leader works too hard, her directive influence is likely to be weakened. This is a truth that it is well for all teachers to remember. Teachers must keep fresh, and vigorous, and enthusiastic, and resourceful. This is impossible if they exhaust their strength over useless labour, as so many teachers are in the habit of doing. The test of a child's progress should be, how much can he do, and how well can he do it? Then the test of the good teacher will be the ability to lead the children to do good work and take pleasure in their work. A child thus equipped has the key to the truest success and happiness. There may be room for a wide difference of opinion regarding the value of particular subjects of the school curriculum; but there can be no question as to the value of the habit of doing good work and finding joy in that work, whatever it may be. It is a great comfort in this period of educational unrest to have in our philosophy some solid foundation on which to stand.

We shall observe other features of Miss Enfield's programme in a future issue.

Teachers' Salaries

From *The Steelton News*, Steelton, Ont.

IT is quite evident the governments of the country will have to step in and do something more for the Public Schools if they are to remain supplied with duly qualified teachers. The politicians of the country are attributing the scarcity of teachers to the abolition of the Model Schools and a dozen and one other causes—to anything and everything but the right cause—the insignificance of the salaries paid. It is nothing uncommon to see columns of vacancies advertised in the Toronto papers, and many of the salaries offered as low as $400, and some even below that figure. Then turn to the public accounts of this Province, look up the salaries paid to civil servants, and you will find scarcely one with an education even approaching that required of a second class teacher drawing less than from $800 to $2,000 a year. This should show our parliamentary representatives, when they are considering the matter again, just why the scarcity exists. The almighty dollar moves everyone, and why should school teachers be an exception? Why should teachers be asked to follow a calling that is supposed to be making and moulding the characters of the youth, that will a few years hence be occupying all the positions of trust and responsibility in the country, for less remuneration than is paid to mere machines in the government offices of the country?

The demand of the day is for men in high offices—representative capacities of every kind—who will get down from their pedestals, put on their thinking caps and fully understand that all men are made of the same clay, and should receive salaries in proportion to the work they have to perform; and that there is a way of doing this without imposing further burdens on the people.

All excessive salaries should be lopped off; all unnecessary officials should be dismissed; moneys should be saved from departments of less importance to the country than the Department of Education, and the savings should be devoted to the bonusing of successful teachers. This would work most beneficially in several respects—it would tend to properly remunerate honest labour, stimulate interest in the profession, and keep worthy teachers in the calling, a matter of the greatest moment generally overlooked in the country.

It would be interesting to watch the effects of the application of such a plan. The teacher whose salary is $500 would receive the first year a bonus of $50 for successful work as certified to by the Inspector, the

second year a bonus of $100, and $50 in addition for each succeeding year of successful work, until, at the end of five or six years, he is receiving as much as the members of other callings of equal education. This treatment would be the dawn of a better day not only for the teachers, but for the people hiring them and for the pupils.

The young man or the young woman not suited to the calling by nature or otherwise (and teachers cannot be made any more than musicians or inventors), would abandon it, in the absence of bonus payments, and the field would be left to those whom nature designed to fill it.

If the teachers, Inspectors and School Boards of the country would take this matter up and represent it to the Ontario Government as it should be represented in common justice to all interested, it would not be long before desirable changes would be promptly made. Governments are made up of human beings as other organisations, and cannot be expected to pick all the reforms that time suggests as necessary out of their own finger ends. They naturally look to occasional suggestions from the people, and here is where a live, interesting and much-needed one can easily be made. Will the teachers in their own interest take this matter up at their annual gatherings?

Suggestions for the Class-room

Schoolroom Discipline.—The old-fashioned topics of order and discipline have practically disappeared from institute programmes. Perhaps instructors take it for granted that teachers are no longer desirous of suggestions which deal with such practical questions, yet it is often true that a large number of failures come from the neglect to maintain good order, which is the old-fashioned name for a well organised school—a school where every pupil works quietly without disturbing the school or the teacher. Every teacher who desires to succeed must establish order, quiet, industry and punctuality during the first month of school or her year's work is likely to prove a partial or total failure. She must have high standards and must contrive to secure the co-operation of her pupils in maintaining these, or there will be great waste in results. —*Exchange.*

Ventilation. –There is a crying need for better ventilation in schoolrooms. Teachers must realise that it is their duty to see that the air of their schoolrooms does not become vitiated. Children blest with fresh air to breathe are gaining that priceless boon, a natural resisting power. —Raymond Cree in *Western Journal of Education.*

Discipline

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NO apology is offered for approaching the time-worn subject of discipline. It is as old as the science of teaching, yet it presents a new problem in the life of every pupil. It occupies a prominent part of every text-book on School Management. But in spite of this it is surprising how many teachers fail, more or less, in this very important feature of their work. More particularly does the inability to control others effect the young or inexperienced teacher who lacks the maturity of judgment that comes with long service. But why cannot the beginner secure that order and decorum that characterise every well-conducted class-room? In the majority of cases she can, if she has the right ideal in view and consistently tries to attain it.

Let us first examine some misconceptions as to the true meaning of this term, so as to discover the real significance by way of contrast. There will be noted some essential qualities in the teacher, conditions of the environment, and finally, a few suggestions regarding devices and expedients.

One type of teacher seems to have the idea that discipline means the suppression of activity, together with arbitrary orders about the multitude of details that go to make up the life of the child. The boy, bubbling over with the superabundance of energy demanding expression, is forbidden to do this or that, or is commanded to do the other thing, quite regardless of any desires or inclinations he may have. It matters not whether he sees any reason or common sense in the command. The order goes forth; he must obey. Someone's will is superimposed on his, with or without the concurrence of his own. That is nothing. He is not supposed to have sufficient ability to decide anything for himself. He is a machine only, to be controlled from without. Should he have the temerity to disobey, a flogging or other form of punishment is the result.

Again, some go to the opposite extreme and exercise very little control. The child is allowed to do much as he pleases. When tempted to do wrong he feels no restraining influence. If he is inclined to work, well and good; if not, it matters little. Does he wish to talk or amuse his chums during school hours? Little difficulty is found in doing so. Even if caught in the act, the penalty is light, and may, perhaps, be evaded, for the teacher is easy-going. A sort of *laissez-faire* atmosphere pervades the room, marring the efficiency of both teacher and pupil.

In neither case is really good discipline possible. In the former the child has no liberty; in the latter, liberty has been exchanged for license. The fundamental error in both instances is that the meaning of discipline is misunderstood. The one assumes that she must direct the child in everything, the other is too indolent or too inactive to interest herself in the matter.

Just consider for a moment. When the boy becomes a man, will he be continually battered about by someone, with no occasion to act on his own authority? Or, will he have someone constantly near him to point out the best course to pursue? Certainly not. Every line of action must be decided on its own merits. Whatever attitude is assumed, the consequences of the proposed action must be carefully weighed, for on the decision depend good or evil results. Thus the adult must have the ability adequately to "size up" the situation, then choose, from a number of possible alternatives, that one which will serve his purpose.

Now, where is he to obtain this insight which will enable him to decide wisely? If he is not rational as a boy, how will he be rational as a man? At what stage in his career does this endowment make its appearance? Manifestly, he must be treated as a rational creature from the start. He is not a machine to be guided, nor a sort of nuisance not to be bothered with. There must be a real training throughout the school period.

In contrast to the two former views, discipline implies such an arrangement of the conditions of life that the pupils will do the right thing at the right time, from the right motive, and, as far as possible, from their own initiative. They must be treated as rational, self-governing human beings. Activities are not to be suppressed, but directed. The habit of right conduct must be so firmly established, the power of self-control so well developed and the ability to discriminate between several courses of action so keenly alive that when manhood and womanhood are attained, children will become good citizens of the state. The child is to be trained rationally, while he is yet a child, through the development of his power of self-control. This word, self-control, embraces the meaning of discipline more completely, perhaps, than any other single word.

As much depends on the character of the teacher, it may be well to glance at some of her requisites. Before doing this it is only fair to say that some of these qualities cannot be imitated. Some are born to rule. Their very manner calls for obedience. The look, the voice, the attitude, all point the same way. This does not imply a threatening appearance, or a sharp, stern tone. The teacher who goes about her work in a quiet business like manner, who addresses her class pleasantly and kindly, but who, without asking for order, expects it, usually gets it. Constantly

before her mind must be the ideal, to teach the pupils self-control. All her actions must be measured by this standard.

Needless to say, the teacher must be perfect master of herself under all circumstances. Never should she give way to unseemly fits of passion before a pupil. It matters not how exasperating the occasion, the teacher must show that she controls the situation. Above all, if punishment is necessary, it should be administered without any trace of anger visible. Nothing so spoils the effect of discipline as the feeling that the teacher's passions are bound up in the punishment, whatever form it may take. Better postpone the dread interview than appear before the transgressor with some emotion running riot, uncontrolled. But some say they cannot do this. They must punish when the fit is on, or not at all. That is just where the difficulty lies. If one cannot control himself, he cannot control others, and all talk about discipline is superfluous.

The ability to organise work is another acquisition. Children will be active; it is their nature. If they are not engaged in work, they will find amusement. Therefore, the exercises must be so arranged that there will be no time for idling. No pupil should feel that he has a minute to throw away. But, on the other hand, "pindrop" order is not advocated. An engineer can tell by the hum of the engine that all the parts are working harmoniously. So there is a certain hum to the educational machinery of a room that reveals its conditions from time to time. Both class-work and seat-work should be carefully arranged, so that each period has its own peculiar occupation. This will entail much hard work on the teacher, but it is the price of efficiency.

Other qualifications are so self-evident that they require little more than mere mention.

(1) Good scholarship—Pupils despise ignorance. No one who must teach with her attention riveted to a text-book can hope to be effective. A thorough knowledge of the work, with the class also convinced of it, commands respect.

(2) Ability to make the lesson attractive, coupled with enthusiasm—Children will cheerfully do what is pleasant, while enthusiasm is very contagious.

(3) Good eyes and ears—One should be able to conduct a class, use the blackboard and know what is going on in every corner of the room at the same time. Vigilance is the price of order.

(4) Common-sense—This means, not sense that is common to most people, but sense in common things. It is the ability to diagnose any crisis properly, and apply an appropriate remedy when necessary.

(5) Be sparing of commands—Command only where you must, but, when a command is once given, see that it is carried out to the letter. Constancy is one of the great factors in discipline.

(6) Character and personality—One who conducts herself well out of school will usually be respected in school. Only when she is esteemed by her pupils can a teacher do the most good. If she can hold their confidence and affection, many other difficulties will vanish.

Among mechanical devices, that of a self-regulating system of control deserves special mention. When order is once established, few rules will be needed, perhaps none at all. An example or two will illustrate. If a boy finds the sun shining in his eyes, why not let him draw the blind without disturbing the whole school by asking permission? Similarly, why not allow him to get books, or pencils, leave the room, or, in fact, do whatever is necessary, without attracting any one's attention? But, some may object, "If children can go about as they please, they will be trotting around all the time, and chaos will reign instead of order". This is easily avoided. The children are given to understand that these privileges are granted on the condition that they be not abused. Any liberty misused is withdrawn. If Johnny cannot get a book without talking to his neighbour by the way, he can get no more books, or leave his seat, without permission. A few trials will convince him that the other is the better system, and he will agree to abide by the unwritten law.

Of course, to make such a system a success, the constant vigilance of the teacher is required. She need not play the spy, but must know what is going on by using her eyes, ears and common-sense. A further condition is that the teacher must enjoy the respect and confidence of her class. But if discipline, in the highest sense, is to be maintained, that is, if pupils are to be exercised in self-control, they should be made to feel in some way responsible for their actions. Before they can form the habit of acting rationally, they must be accustomed to doing so, and without the direction of any one but themselves. This is not a visionary theory. It has been put into practice by the writer and others, both with junior and advanced pupils, with very satisfactory results.

The nature of the surroundings has more influence on pupils than is commonly supposed. In a bright, clean room, tastily decorated, there is little inclination for disorder. But in a dirty, dingy place, there is slight inducement to either work or good behaviour. Are the seats old and moth-eaten? A few ruts cut with a knife will not make them much worse. Is the floor dirty? Muddy feet are in keeping. Are the walls bare, or badly scratched? A few verses or witticisms add to the decorations. But in a bright, cheerful, tastily adorned room, pupils are actually ashamed to disfigure anything. They will even take their own meas-

ures with any one found interfering with the furniture or equipment. These things are mentioned because they come within the sphere of the teacher's influence. She can, by securing the hearty co-operation of pupils and parents, make many changes that will turn a forlorn schoolroom into a place where study may be pursued with pleasure.

In this brief discussion on discipline only the essential features have been mentioned. There are hundreds of details which can safely be left for the individual teachers to adjust to their particular needs. The main consideration is to keep the ideal constantly in mind, namely, training for citizenship through the medium of self-control. The first step in putting these suggestions into effect is to obtain the esteem and confidence of the pupils. When this is secured, the rest is comparatively simple. Gradually and almost imperceptibly the general tone of the room will undergo a change. The lessons will take on a new interest, and "going to school" will not only become a pleasure, but will lead to the development of citizens who will do honour to their school, community and country.

"How does your new book on pedagogy go?"

"Great! I am convinced that it is a classic."

"A classic? What convinces you of that?"

"Every schoolmaster has either seen it or heard of it, but not one has bought it." —*American School Board Journal.*

An unprepared school director went to address a school. Thinking to be funny, he asked this question:

"What would you do before so many bright boys and girls, who expected a speech from you, if you had nothing to say?"

"I'd keep quiet," replied a small boy.

—*American School Board Journal.*

The very essence of a good teacher is that he should know so much and know it so readily and clearly that he can answer any fair and honest question that is asked about the matter he is teaching, and answer it in the language and according to the way of thinking of the person who is asking him.—*Thoughts on Education by Bishop Creighton.*

"An' that ungrateful boy of mine," whimpered the man in the prisoner's dock. "After all the sacrifices I've made for him he refuses to pay my fine."

"What sacrifices did you make for him?" asked the attorney.

"What sacrifices? Didn't I let him earn his way through college?"

—*American School Board Journal.*

Manual Training

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IN view of the interest that is being manifested in industrial training and its place in the educational system, it becomes pertinent at this time to inquire into the part manual training has played in the past and is to play in the future in regard to these newer developments.

Conceptions of education change not only in regard to the subjects that should be included in any system, but also with regard to the content and direction of the subjects that are included. There are no subjects in the curriculum which portray this tendency more than household science and manual training.

Household science, which can be regarded as the feminine of manual training, was introduced largely for its cultural value, and the idea that it should impart some really definite information and confer general dexterity and skill in household management was not accorded such ready acceptance by its early advocates. Now it is being recognised that housekeeping and home-making is just as much a trade and needs as careful preparatory training as any other industry, and both the cultural and practical values, if these can be separated, are receiving due attention.

The arguments urged for the introduction of manual training were deliberately designed to satisfy labour organisations. It was loudly proclaimed that the subject had nothing to do with teaching a trade, that it had no connection with industry, and that it would not predispose boys to enter mechanical pursuits. With the proposition that manual training does not, cannot, and should not attempt to teach a trade we can all heartily agree, but the idea that it has no connection with industry will not to-day find such ready acceptance. If manual training cannot be justified on the practical as well as the purely cultural side, then it should have very little place in the training of boys and girls—the eighty or ninety per cent. who get no further training than the elementary schools can give.

Superintendent Maxwell, of New York, has said: "The attempt now being made in some quarters to separate manual training from industrial training will prove a dismal failure. It is only through manual training that we are able to discover those who have any aptitude for mechanical pursuits."

Our industrial training—it does not matter by what name we call it—should begin in the Public Schools. It is there and there only that the pupils can have given to them an industrial bias and bent which will lead

them to consider productive industry as a profitable career, and to investigate the prospects that it has to offer them. It is there the erroneous ideas they have regarding industry in general can be corrected, and if our industrial education is to have a solid foundation, the importance of a sound scheme of manual training cannot be over-estimated. We can retain and even increase all the cultural value that manual training now possesses and yet make the subject give a direct help to the industrial development of the boy or girl. President Eliot has said: "If a man practise blacksmithing studiously or agriculture thoughtfully he is getting culture."

There are now throughout the Province of Ontario seventy-two manual training centres and fifty-eight household science centres, but even in those places where the subjects have been introduced it is a difficult matter to bring them to the point where they are looked upon as integral parts of the course of study. They have simply been regarded as additional subjects, and no intimate relationship has been established with the remainder of the curriculum. The grade teacher has held aloof, and the manual training teacher has placed himself on a pedestal and refused to have any connection either with other school subjects or practical industry. But now, fortunately, a change is rapidly coming over the spirit of the dream. The grade teacher is coming to believe, and what is more, is acting upon the belief, that manual training and household science may be made a great help to her work, not only in the actual subjects of instruction, but also in vitalising interest and stimulating ideals. The manual training teacher, on the other hand, is using more and more mathematical and scientific facts in his instruction, and is establishing a real connection with practical industry.

Those of us who are more directly concerned with the propagation of manual training will act unwisely if we shut our eyes to certain defects that, owing to various reasons, have gradually crept into the work. These are defects not peculiar to Ontario or Canada, but are found the world over where manual training is taught.

The methods adopted have in too many cases been foreign to the shop and have been such that, if a boy used them in the shop, they would earn for him at least a reprimand from the foreman. I have visited exhibitions where boys have been at work giving practical demonstrations of manual training, and have stood and listened to the comments of artisans and mechanics, and in many cases these comments have been the reverse of favourable. Modified shop methods can be adopted with success after a certain amount of preliminary training has been given, without at all detracting from the educational and cultural value of the subject.

The development of manual training has been rather peculiar. First we had the type exercise where the boy had to make a "joint" about

which he knew nothing and cared less. I have seen piles of these joints so little thought of by the boys that they would not take the trouble to carry them home, and they were consigned to the furnace. Next we had the "Sloyd" influence, which at least infused a certain amount of interest and inculcated the making of useful objects, though the mistake was made in many cases of supposing that the "system" consisted of the actual models made in Sweden, and that any departure therefrom would destroy the continuity of the whole scheme. Sloyd also insisted upon accuracy (a variation of three millimetres from the drawing being sufficient to cause the rejection of a model), a lesson which is yet required in much of the work done. Then came the craze for "originality", "inventiveness", "self-expression", and in the name of one or other of these we have had perpetrated objects which have caused derision amongst those who know good craftsmanship when they see it. It was thought by allowing a boy to make something entirely beyond his executive skill that his "self-expression" would be developed, his "inventiveness" stimulated, and his "originality" encouraged. It did not at all matter that the joints gaped, that the angles were far from right angles, or that the object was ill-fitted to serve the purpose for which it was designed (?). This striving after "originality" reminds one very forcibly of Robinson Crusoe's first attempt to make a boat: "I went to work upon that boat the most like a fool that ever man did who had any of his senses awake. I pleased myself with the design without determining whether I was ever able to undertake it." The tendency at the present time, which needs to be guarded against, seems to be in the direction of large pieces of furniture, in many cases entirely beyond the strength and capacity of the boy. In some instances the jointing and machining of large pieces has been done at the mill, an entirely reprehensible proceeding.

In England to-day manual training is in many places in the throes of the "self-expression" craze. During the past summer many articles were pointed out to me which the teacher proudly claimed showed correlation and self-expression. Among these were a crane which violated all mechanical principles—models of a Canadian farm, a timber slide, a lumber camp, and a grain elevator which, while being gratifying as showing the intense interest that is being taken in Canada, were lamentable from a mechanical and constructional point of view, and indicative of many incorrect notions about our life and industries. Manual training has an "a, b, c" which has to be learned before originality, inventiveness and self-expression can be allowed full play, and unless this "a, b, c" is learned all future progress is unsound.

What has been said hitherto refers to those towns and cities that have found it possible to equip special rooms and provide special teachers.

The cost of these makes it very difficult, if not impossible, to establish them in towns of less than 5,000 population. There are in the Province of Ontario thirty-eight towns and cities of this character. Twelve of these are yet without manual training and fifteen without household science. When these towns have introduced the work the only hope for further extension throughout the Province is by a system of co-operation between the smaller towns. There are many groups of three or four small towns on an electric or steam railway which could combine to engage a teacher among them. Owing to the liberal grants for equipment now made by the Ontario Education Department, rooms could be fitted up in each place and the teachers spend one or two days in each as required by the number of pupils.

There is a certain amount of work in elementary manual training which can be satisfactorily done in the grades by the grade teacher in the ordinary class-room—work in plasticine, clay, paper, cardboard, raffia and thin wood. With the object of assisting the teachers to take up this work successfully, the Department has recently issued an excellent manual dealing with all these materials and offering all the help that can be required even under the most unfavourable conditions.

The limits of this article preclude any but the most fragmentary treatment of the subject. We must admit that both manual training and household science are handicapped and the time limited, but then we have to ask ourselves whether the most efficient use is being made of the time that is often grudgingly given. This question we cannot always answer in the affirmative.

The measures that seem to be now needed are:

1. The frank admission by all manual training advocates that the subject has a decided and distinct industrial value, which is at least as great as the cultural value, in the training of boy or girl.

2. A re-awakening of public sentiment and a revival of popular interest in the subject on the above grounds.

3. The employment of teachers who, in addition to the widest professional and academic training possible, have above all an accurate working knowledge of shop requirements, conditions and methods.

4. The employment of these shop methods in the manual training room whenever that is possible without sacrificing the educational interests of the pupils.

5. The adoption of various methods calculated to bring about a closer correlation between the industrial work of the home and that of the school.

6. The devotion of much more time and attention to manual training, household science and drawing of an intensely practical kind with a direct local and industrial application.

Canadian Artists Series

III.

"Landscape pure and simple is a large enough theme to keep one busy, and all my life is too short to render more than a fraction of the woodland beauties that appeal to me."
—*Homer Watson.*

In the frontispiece of this issue, Homer Watson, Canada's great landscape painter, gives an example of his power of interpreting nature in one of her most delightful moods. The leafy woods bask in sunny splendour. The scarred and knotted tree trunks, emblems of life's stress and strain, have twisted and bent in many a tussle with the elements, but on this rare June day they rest in dignified calm. The sinewy spreading branches afford a green covert for the holiday seekers beneath them, but the figures introduced into the picture do not detract from but emphasise the main theme, the restfulness and joy of "the June woods". How beautifully these shaded forest glades open out upon the luminous skies and fields beyond!

Homer Watson loves trees—big, strong trees. These he paints with a subtlety of touch and a beauty of handling which are characteristic of him alone. Even when he digresses from his woodland theme to paint some phase of pioneer life in Canada, these giants of the Canadian woods appear as the vanquished victims of the all-conquering settlers' power. We notice this in such pictures as "The Loggers", and "Clearing the Land". In the latter, through the smoky evening haze, the oxen, urged on by shout and whip, are dragging from its stronghold a mighty, strong-rooted stump. The clearing fires and burnt, ashes-laden land are evidences of the means employed in the devastation of the greenwood.

The village of Doon, Ontario, has the honour of being the birthplace of Homer Watson. Here he has lived and developed his art. He is an artist by force of nature. In spite of the opposition of well-meaning but unsympathetic friends he chose painting as his life-work. His first large picture, "The Pioneer Mill", was shown at the first exhibition of the Royal Canadian Academy, and was purchased by the Marquis of Lorne, who was at that time Governor-General of Canada. This picture, in company with another of Mr. Watson's, now hangs in Windsor Castle.

Among the pictures which have made Homer Watson famous should be mentioned "The Torrent", now hanging in Kensington Palace; "The Stone Bridge in the Forest", in Oxford University; "The Mill in the Ravine", in the Alexander Young Collection, and "The Wreckers", at the Mount Royal Club, Montreal. Some of his masterpieces of more recent dates are: "The Source", "Spring in the Woods", "Evening After the Rain", and "October Day on the Grand River". The last two were chosen by the Art Commission from those shown at the exhibition of the Canadian Art Club, for the Canadian exhibit at the National Exhibition where they attracted much attention.

One of Mr. Watson's outstanding characteristics is his sturdy individuality. By the time he was thirty he had thoroughly grounded a style of his own. Then he went abroad to drink at the fount of the old masters. Returning to Canada, he determined to adapt all he had seen and studied to his native surroundings, to prosecute his art in his own

Homer Watson, R.C.A.

way. This accounts for his landscapes being, not French, nor English, but Canadian. Some critics have classed him with Rousseau and Constable. It is true that his landscapes show the force and imaginative grandeur of the one, and the colour realism of the other. But this affinity with the French and English landscape painters is Homer Watson's by natural inheritance, and not by imitation. His art was established and his fame won before he became acquainted with the works of these fathers of modern landscape. S. W. P.

The Teaching of French

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THE teaching of modern languages has undergone enormous changes in the past few decades. When introduced into the curriculum, they were taught just like Latin and Greek, often by teachers who had little knowledge of them, at least as living languages, and whose training had been along traditional classical lines. The essential things were a good knowledge of grammar, especially of the verb forms, ability to translate into English, and much practice in turning English into French or German. But it was soon realised that this was not a satisfactory way of studying a living language. It might, if carried far enough, eventually produce scholars with much knowledge of books, but gave no ability to use the language as a medium of communication in France or Germany. A demand arose for a more practical method. As a result numerous so-called "natural" methods were published and taught with more or less success; all aiming at giving the student a colloquial knowledge of the language studied, some even professing to enable him to read, write and speak it in the course of six months. Among the best known are those that go by the name of Ahn, Ollendorff, Prendergast, Bétis and Swan, Gouin and Berlitz.

Ahn's motto was: "Teach a child a foreign language as he learns his mother-tongue", and instead of the long-drawn-out grammatical drill, the Ahn course begins with a few common words, whose use is exemplified in short, easy sentences. This kind of work is continued and extended, the vocabulary being gradually enlarged and the constructions becoming more varied, while the grammar is introduced and systematised by degrees. Ollendorff, whose books had an enormous vogue in many countries, followed somewhat the same plan, but gave it a wider development. He laid special emphasis on all sentences being question and answer and on constant repetition, so that at least all common words and constructions should become quite familiar to the student.

Prendergast begins in quite a different way. Holding that the sentence, not the word, is the unit of speech, he starts with a sentence in the foreign language. This and variations of it the student is set to practise again and again until he can repeat them all "trippingly on the tongue". He then passes to another sentence and its variations,

and so on and so forth, until he can speak the foreign idiom with confidence and ease.

The method associated with the names of Gouin, Bétis and Swan has been described as the "psychological" method. The current vocabulary of a language is arranged in groups, each group containing words and phrases intimately connected. Each group forms a lesson. The groups are combined in chapters, each dealing with one general topic, and several chapters form a "series". When all these have been carefully studied and frequently reviewed, the whole spoken language will have been mastered. Each lesson is first worked out orally and then studied from a book. Real objects or drawings, gestures and pantomime are all employed to aid and enliven the work; but most emphasis is laid on association of ideas and the habit of "mental visualisation". The foreign language is freely employed in teaching, but English is not tabooed, especially in the early stages.

M. Berlitz, who publishes text-books in various languages and claims to have over 400 schools throughout the world, where his method is taught, states that his system is based on object teaching and easy conversation, and calls it "a purely natural method". He has some books for self-instruction, with the pronunciation marked; but the system is primarily intended to be taught in his schools, by foreign teachers, more or less qualified, each "professing" his native tongue. No translation is admitted; all explanations, grammatical and other, are given in the language studied; the exercises are almost all of a conversational nature, and are very abundant. The classes are always very small, and their success depends less on the method than on the competence of the teacher.

The "phonetic", otherwise the "new" or "reform" method, dates from the publication, in 1882, of the famous pamphlet by Professor Viëtor, of Marburg, entitled: "Der Unterricht muss umkehren"—language teaching must be reformed. Of other advocates of the method Max Walter of Frankfort, Paul Passy of Paris, and Walter Rippmann of London, are among the best known. The method resembles the "natural" and the "psychological" in so far as it takes the spoken language as a basis and at first relies mainly on oral instruction, using the foreign language as far as possible as the teaching medium. But it insists at the beginning on systematic training of the ear and vocal organs by means of a thorough drill in the sounds—vowel and consonantal—of the foreign tongue. Then isolated words are given to exemplify the sounds, and these are next used in simple phrases, which are subsequently combined into dialogues, descriptions and stories. All this work is at first oral, and the first printed symbols shown to the pupils are those of the phonetic chart. When these are thoroughly known, a phonetic text is

used, and only when it is quite familiar is the transition made to the ordinary spelling. Objects, pictures and maps are used freely; the reading matter deals with the country and the life of the people whose language is studied, and every device is employed to impart the foreign "atmosphere". Grammar is studied as far as possible inductively; dictation is freely practised; composition consists first of the oral and written reproduction of matter read and discussed; while translation comes last of all.

Still another method is what is termed the "reading" method. In this the reader is made the centre of instruction. The beginner starts with easy reading matter, usually short stories of some intrinsic interest, which gradually increase in difficulty. The ground is covered quickly; from the first there is abundant practice in translation and sight-reading, leading on to ability to read the foreign language with intelligence and ease. Grammar and composition are regarded as subordinate, and are reduced to a minimum. They are usually dealt with inductively, and in the best text-books the reading matter is so arranged as to lend itself to a methodical study of grammar, each lesson containing only a few new forms, which are introduced gradually in a definite order.

The memorandum on the Teaching of Modern Languages in Secondary Schools, published last year by the English Board of Education, contains much that is of interest to the teacher of modern languages. It states, as follows, what may fairly be expected of pupils who have completed a course in French or German in an efficient Secondary School:

(*a*) To understand, within a vocabulary of reasonable scope, clearly enunciated French or German speech.

(*b*) To use readily and correctly, within certain limits, both the spoken and the written language.

(*c*) To read with ease and intelligence French or German prose and verse of ordinary difficulty, and to possess a first-hand acquaintance with some, at least, of the prose and verse masterpieces of the respective literatures.

In dealing with the newer methods, as above outlined, which are sometimes called generally the "Direct Method", the memorandum pays a tribute to the reformers in giving them credit, not only for vivifying the whole study of modern languages in the schools, but in raising them to a position of dignity in the curriculum. Coming to points of detail, it asserts general agreement (1) that the initial study of a modern language must be based on the spoken idiom, and (2) that a systematic and thorough study of grammar is an essential condition of sound progress; but notes (3) considerable disagreement as to the place to be taken by translation, and (4) a general tendency on the part of language teachers to do too much for their pupils and to exact too little strenuous

work and independent effort from them. Then follow certain suggestions dealing with pronunciation, grammar, singing and recitation, translation, and composition, which are essentially similar to those of an American report on the same subject.

Some sentences from the section entitled "Choice of good Literature" are specially worth quoting: "After the necessary foundation has been laid, good literature should form the staple of class-work. Complete texts of suitable difficulty should be introduced as soon as the class is fit for them. This will, no doubt, be always possible at the beginning of the third year, and in many cases earlier. The texts should have few, if any, notes, and pupils should early be trained in the use of a good dictionary. The premature study of difficult authors should be avoided. But it is all the more necessary to insist that in the higher stages of the course much harm has probably been done by the trivial nature of the French texts read. Even more harm has been done by the improper use of short unconnected passages. Collections of such passages should never be used as a substitute for continuous texts. The systematic and scholarly study of the best writers is essential."

The memorandum is followed by a very interesting appendix, viz., the schemes of modern language work adopted in eight selected secondary schools, including a first grade boarding school for boys—one of the large "Public Schools",—a large girls' High School, two smaller day and boarding schools for boys, an endowed grammar school for boys, and three county secondary schools—one for boys, one for girls, and the third for both boys and girls. While these are all suggestive, it is not easy to summarise them in brief form. The following may, however, be taken as substantially correct:

(1) The lessons are in most cases five a week, of 45 minutes each.

(2) In every case the first work is entirely oral, usually followed by easy reading in phonetic transcription.

(3) Grammar is systematically studied in the majority of cases from a text-book written in French, followed, however, in some cases by a standard French grammar in English.

(4) Much reading is done, almost all of continuous texts, and including literary masterpieces in the upper forms. In some schools certain texts are set for intensive study, others merely for rapid reading.

(5) Translation is in some cases done at all stages, in others only in the upper forms.

(6) Composition takes the forms of reproduction, translation from English into French, and free composition.

On the whole, the present tendency, as regards both translation and composition, is away from the position of the extreme "reformers". The use of the mother-tongue, to save time and trouble, is admitted in

the early stages, even by such a stalwart reformer as Max Walter (witness his recently published French demonstration lessons, as given in New York); while translation into English is usually regarded as essential later, where real literature is being read; and translation into the foreign tongue is recognised as making for a scholarly and thorough grip of the language such as free composition can hardly give. It is generally admitted, too, that ability to speak the foreign language freely, much less to think in it, cannot be acquired in an ordinary school course; but that it is possible to train pupils so that (1) they can understand the language, if slowly and clearly spoken, within a limited range, and (2) they have at least overcome the initial difficulties of expressing themselves in it, also within a limited range. In addition, they should be able to read it accurately and with some fluency; to understand and appreciate good literature of moderate difficulty; to write to dictation and to compose an ordinary letter with some degree of accuracy.

The general effects of the reform movement, apart from raising the dignity of modern languages in the school curriculum, may be summed up as follows:

(1) The lessening of grammatical drill.
(2) The extension of the reading course, and the tendency to study modern authors rather than classics.
(3) Less translation and more conversational work.
(4) More emphasis on correct pronunciation and a scientific study of sounds.

While the more ardent reformers—as reformers almost invariably do —have shown self-confidence and intolerance and made extravagant claims which have failed of realisation, the movement has not only stimulated the study and teaching of modern languages, but has reacted on the teaching of classics and English. In these subjects, too, grammar has been put in its true place, and the study of literature is acknowledged to be more important than the study of language.

In conclusion, I end by stating that the teacher of French, as of any other subject in the school curriculum, should bear in mind the essential aims of all school training, self-realisation and many-sided interest. To these I would add self-reliance. If the teaching of French, whatever be the method followed, serves in some measure to promote these aims, it is not entirely in vain.

Mother (looking over her boy's shoulder) "Your spelling is perfectly terrible."

Little Son—"That isn't a spelling lesson. It's a composition."

—*Primary Plans.*

Library Hints for Modern Language Teachers

IN response to a number of requests which have come from several teachers, the following list of books has been prepared, which it is hoped will prove of some service to the instructors in modern languages. In the case of such firms as have representatives in Canada, the address has been given; information in regard to the others will be cheerfully given by any of the publishers who advertise in this journal.

Pronunciation and Phonetics.

Rippmann: Elements of Phonetics; English, French and German. J. M. Dent & Sons, London and Toronto. 75 cents.

Passy: Sounds of the French Language; translated by Savory and Jones. Oxford University Press. London and Toronto. 60 cents.

Bascan: Manuel Pratique de Prononciation Francaise. 65 cents.

Bascan: Lectures Dictées de Phonétique Francaise. 30 cents. J. M. Dent & Sons. London and Toronto. A scholarly presentation of the theory and difficulties of French pronunciation. Use is made of the alphabet of the International Phonetic Association.

Rousselot: Précis de Prononciation Francaise. Published in Paris. Price in Canada about $2.00. A standard work.

Dumville: French Pronunciation and Diction, new edition, 1912. J. M. Dent & Sons. London and Toronto. 75 cents. (See Library Hints in The School for January, 1914.)

Vietor: German Pronunciation. O. R. Reisland, Leipzig, M3. About 75 cents.

Johannson: Phonetics of the New High German Language. Published at Leipzig and Manchester. 75 cents.

Siebs: Deutsche Bühnenaussprache. Published at Berlin and Leipzig. Price in Canada, about $1.00. The standard work on German pronunciation.

There are also a great number of texts and readers now published in England in phonetic type, which might be of interest to the progressive teacher. Lists may be obtained from the following firms on application: J. M. Dent & Sons, Toronto; The Macmillan Company, Toronto; G. Bell & Sons, Kingsway, W.C., London; A. & C. Black, London; Geo. G. Harrap & Co., London; Blackie & Son, London; Rivingtons, London.

Wall Pictures and Charts.

Dent's Wall Pictures of the Four Seasons. Printed in Colours. 55 by 35 inches. Mounted on linen and eyeletted. $1 each.

Mounted on linen with rollers, $1.75 each. (To accompany Dent's First French Book.) J. M. Dent & Sons, London and Toronto.

Subject Wall Picture. Coloured. 60 by 40 inches. Mounted on rollers. About $2.00. (To accompany McKay and Curtis's First French Book.) G. Bell & Sons, Kingsway, W.C., London.

Trente Histoires en Images sans Paroles. En tableaux muraux. Collection en noir. 15 francs. Collection en couleurs. 25 francs. Librairie Fernand Nathan, 16 & 18 Rue de Condé, Paris.

This excellent series is accompanied by a little explanatory book, "Pour raconter les Trente Histoires en Images de Jean Perrot et Fernand Fau. Prix 40 centimes.

Dent's Phonetic Charts. 30 by 30 inches: (1) Les Sons du Francais; (2) Deutsche Laute. Mounted on linen, each 75 cents: mounted on rollers, $1. J. M. Dent & Sons, London and Toronto. For class use.

[In subsequent issues lists will be given of dictionaries, books of oral work and composition, books on life, manners and customs, and supplementary texts.]

W. C. F.

Some schoolboy "howlers" were printed in a recent issue of the *University Correspondent*, which recently awarded a prize of one guinea for the best collection of twelve amusing mistakes. The following are typical examples of various kinds:

Finally James II gave birth to a son, and so the people turned him off the throne.

After twice committing suicide, Cowper lived till 1800, when he died a natural death.

When Chaucer describes the Prioress as amiable of port, he means that she was fond of wine.

When the last attack at Waterloo proved a failure, Napoleon turned very pale, and rode at full gallop to St. Helena.

The mineral wealth of a country is ginger-beer and lemonade.

The imperfect tense is used in French to express a future action in past time which does not take place at all.

Much butter is imported from Denmark, because Danish cows have greater enterprise and superior technical education to ours.

In the British Empire the sun always sets.

Wolfe declared that he would rather repeat Gray's "Elegy" than take Quebec.

The Three Estates of the Realm are Buckingham Palace, Windsor and Balmoral.

Current Events

The Union of South Africa.—The great Boer War was formally closed by the terms of peace signed at Pretoria on May 21st, 1902. Eight years later, in 1910, the anniversary of the peace was celebrated by the inauguration of the Union of South Africa, under the leadership of Premier Louis Botha, a former general of the Boer armies.

In view of the tremendous problems which the new Union had to face, the choice seems to have been a fortunate one. The most formidable leader of the Boer forces, now a general in the British army, has declared it his policy to promote the prosperity of United South Africa along non-racial lines.

When the provinces of British North America were united to form the Dominion of Canada, they determined on a federal union, that is to say, each province kept its own legislature, while affairs common to all were transferred to the central authority of the Dominion. This example was followed by the Commonwealth of Australia. It had long since been adopted in the United States of America. The provinces of South Africa, however, following the example of the United Kingdom, preferred a legislative union. There is one parliament for all; in place of provincial legislatures there are provincial councils in the four provinces, namely—Cape Colony, Natal, the Transvaal, and the Orange Free State. These councils are elected by the people, and are allowed to make ordinances regarding direct taxation in the province, agriculture, municipal institutions, and, at least until 1915, education. But even these ordinances must receive the assent of the executive of the Union before going into force. In the House of Assembly of the Union, corresponding to our House of Commons, the four states are represented in proportion to the number of European (i.e., white) male adults in each. At present Cape Colony has fifty-one members, the Transvaal, thirty-six; Natal and the Orange Free State, each seventeen. In no province except Cape Colony are the natives allowed to vote.

The most difficult problem that South Africa has to face lies in the racial differences of her population. Of the six million inhabitants, according to the census of 1911, about four million seven hundred thousand are natives, i.e., Kaffirs, bushmen, and Hottentots; only about one million, two hundred and fifty thousand are whites. Moreover, during the last seven years while the increase in the white population has been 14.44 per cent., the increase in coloured population has been 16 per cent. The immigration of Europeans (in 1911 only some nine thousand) is inconsiderable. At present many of the industries in South Africa depend on the natives for their unskilled labour. Many of the natives, however, in South Africa, as in India, aspire to higher things,

and are making their way into the trades and even into the professions. A possible solution of the racial question as between the Europeans and natives was suggested in a speech by General Botha to lie in the direction of keeping natives and whites apart in separate areas and preventing their intermingling.

The racial problem is further complicated by the presence in Natal of one hundred and thirty-three thousand coolies, brought over from India to labour on the tea and sugar plantations. They already outnumber the white inhabitants and chafe at the restrictions imposed upon them! Their protests are supported by the active and outspoken sympathy of the Hindus in India, and may profoundly affect politics there.

Within the last two months the chief interest in South African politics has centred round a labour dispute. The government, which owns practically all the railways in South Africa, effected some months ago a considerable reduction in staff of the railways and in the pay of some employees who were retained. The resulting strike was dealt with by General Botha's government in a fashion so summary as to amaze people who are familiar with the usual methods of governments in the British Empire. Although there had been no disorder that could be attributed to the strikers, an army of seventy thousand was mobilized by the government on a war footing, and the leaders of the Labour Party were promptly arrested. The result was an attempt on the part of the labour men to call a general strike. The government immediately proclaimed martial law, and when the strikers attempted to guard some of their leaders from arrest, a cannon was brought up and trained on the Trades Hall in Johannesburg where the leaders were being guarded by the men. They were given fifteen minutes to surrender and found it necessary to yield. Subsequently, without even the form of a trial, ten of the labour leaders under a strong guard were put on board ship at night and deported by the government. They are now (February 14th) on the high seas on the way to England. The incident has, of course, created a great deal of excitement amongst labour circles in Great Britain, an excitement which will, doubtless, be increased by the arrival of the men on English soil. It can hardly be expected, however, that any influence that can be brought to bear on the British government will lead them to interfere with the affairs of what is now a self-governing British dominion. In the meantime the strike in South Africa, which never showed much promise of success, has collapsed. The leaders are still in prison. Can the government of South Africa hope permanently to adopt such a policy toward labour unions? The outcome of the dispute will be awaited with interest by all who realise the importance of the labour problem and the latent strength of the labour interests. W. E. M.

Notes and News

[Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this section.]

Mr. McDonald, of Carberry, Man., has been appointed principal of Markdale Continuation School.

Mr. C. B. Woolley, formerly of Thorold, has accepted the position of science master in Tillsonburg High School.

Miss J. Laurence, of Carmen, Man., is now principal of Tavistock Continuation School.

Bath Continuation School has secured the services of Mr. Ralph J. Neelands, formerly of Toronto.

Miss C. G. Leake, of Medicine Hat, is teaching Household Science in Lethbridge, Alta.

The position of Principal of Nobelton Public School has been filled by the appointment of Mr. E. T. Varden, of Aylmer West.

A Department of Chemistry has been established in London Collegiate Institute, with Mr. J. W. Firth, B.A., as Head. Mr. J. F. Calvert, B.A., is now in charge of the remainder of the Science.

The brief paragraph which appeared in the "Notes and News" column of the February issue relating to admission to High Schools needs some elaboration. The High School Entrance Regulations issued by the Department of Education in 1913 give to High School Entrance Boards the option, under certain conditions, of adopting a scheme whereby they may admit candidates to High Schools on the certificate of the principal of the Public School attended. This provision of the Regulations, however, is new only in detail. As a matter of fact, last June the Ottawa Entrance Board, acting under the former regulations, admitted a considerable number of pupils to the Collegiate Institute on the certificates of the principals of the several Public Schools of that city. When an Entrance Board adopts such a scheme and admits to High Schools on the certificate of the Public School principal, those who are not so admitted may, as heretofore, write on the Junior High School Entrance examination papers in June, provided they have completed the course in the subjects of Group I. Those interested should refer to the Regulations for full information.

On account of the death of Inspector McLaughlin, the schools of Manitoulin District have been assigned for the present term to Inspector D. M. Christie, B.A., of Sudbury. Inspector R. O. White, of North Bay, takes charge for the present of Mr. Christie's division.

Mr. H. E. Amos, B.A., B.Paed., of Port Rowan, has accepted the principalship of Grimsby High School.

Mr. W. B. Weidenhammer, B.A., for several years Principal of Exeter Continuation School, is now Principal of Oakville High School.

Mr. Charles Auld, B.A., formerly of St. Thomas Collegiate Institute, is now Principal of Tillsonburg High School.

Three Toronto High Schools, Malvern Avenue, Oakwood and Riverdale, have been raised to the status of Collegiate Institutes.

Mr. Geo. Spark, B.A., has been appointed Principal of Exeter Continuation School.

Mr. J. G. Cameron is acting Principal of Parry Sound Continuation School.

Miss Eva M. Crummer, who was assistant in Fingal Continuation School, has been promoted to the principalship of the same school.

Mr. B. S. Scott is Principal of Brussels Continuation School.

Some transfers which have occurred during recent months are:— Miss S. G. Story from Lindsay Collegiate to Aylmer High School; Mr. J. A. Hamilton from Hagersville to Dundas High School; Miss Hazel I. Reid, B.A., to Harriston High School; Mr. Robert J. Sinclair to Mount Forest High School; Mr. John S. Crerar to be acting Principal of Port Rowan High School; Miss Harriet A. Patterson to Sault Ste. Marie High School; Miss Nellie M. Philp, B.A., to be Principal of Winchester High School; Miss I. K. Cowan, B.A., to Barrie Collegiate Institute; Miss M. Ada Dickey, B.A., from Napanee Collegiate to Lindsay Collegiate; Miss Clara I. Tapscott, B.A., to London Collegiate; Miss Mary Bain, B.A., from Cornwall High School to Napanee Collegiate; Miss Sarah J. Baker to teach Commercial Work in Napanee Collegiate; Miss Elva J. Locklin, B.A., to Napanee Collegiate; Miss Jessie D. Ross to teach Household Science in Port Arthur; Miss Zella J. Lawrence to St. Catharines Collegiate; Miss Daisy E. Taylor to Stratford Collegiate; Mr. W. C. Rogers, M.A., from Markdale to be Principal of Beaverton High School; Miss Vivian E. Montgomery to the staff of Exeter Continuation School; Mr. Stinson Prosser to Fitzroy Harbour Continuation School; Miss Mary A. Gillespie, B.A., to Lanark Continuation School; Miss Beatrice Brain, B.A., to Maxville Continuation School; Miss Annie Callander, B.A., to North Gower Continuation School; Miss Jean Merchant to Parry Sound Continuation School; Miss Reta Hiscock, B.A., to Stella Continuation School; Miss Edna V. Eastcott to Tamworth Continuation School; Miss Elizabeth C. Kennedy to be assistant in Tavistock Continuation School.

Mr. J. W. Maloney, of the 1912-13 class of the Faculty of Education, Toronto, has been appointed to the teaching staff of the Ontario Institute for the Blind at Brantford.

Miss Elsie K. Beaman, of Essex, is now assistant in Comber Continuation School.

Miss Nina G. Bell of Colborne, Miss Mabel D. Arthur of Weston, Miss May M. Stewart of Renfrew, Miss Dora Cooper of Dryden, and Miss Hazel Row of Fort William, assumed positions in the various Public Schools of Fort William at the beginning of the term.

Mr. F. W. Grandy is teaching Junior Science, Art and Arithmetic in Barrie Collegiate Institute.

Mr. A. A. Affleck, a recent graduate of the F. O. E., Toronto, is teaching Classics at Port Hope High School.

Miss Luella Grainger, formerly of Creemore Continuation School, is now Principal of the Continuation School at Jarvis, Ont.

Miss Beulah H. Miller, of Smith's Falls, has been appointed teacher of Household Science in Stratford Collegiate Institute.

The St. Catharines Collegiate Institute Board is considering the erection of a new building to take the place of the structure which has done duty as an educational institution for over half a century. Dr. Sutherland is Chairman of the Board for 1914.

Mr. James Short, Chairman of the Calgary Board of Education, visited Toronto recently to secure data in connection with the system of medical inspection in vogue here.

Master James M. Stock, of S.S. No. 7, Downie, was made the recipient of a watch for his bravery in rescuing a schoolmate from drowning last March.

The Board of Education of Guelph presented Mr. J. W. Charlesworth with a testimonial and purse in recognition of his twenty-five years' service on the staff of the Collegiate Institute. He has accepted a position at the Ontario Agricultural College.

President F. F. Westbrook, of the new University of British Columbia, was in Toronto recently securing information for the organization of that institution.

At a meeting of the Canadian Club in Hamilton, Dr. J. W. Robertson, chairman of the Royal Commission on Technical Education, delivered an interesting address, outlining the practical benefits which will result from the adoption of the report recently presented to the Government.

The Canadian Government has awarded the contract for the construction of the largest astronomical telescope in the world. This instrument, which will probably be erected at Ottawa, will have a glass reflector six feet in diameter and weighing approximately two tons.

The cities of Grand Rapids and Kalamazoo are considering the adoption of the Trade School plan which has proved successful in the Lansing

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City schools. Under this system the boys work in pairs and spend alternate weeks in school and factory.

A School of Mines for Northern Ontario has been established at Haileybury High School.

Dundas Street Public School, Whitby, was damaged by fire to the extent of $1,000 on January 13th.

The Flintshire Education Committee reports that eighty-three children have attended school for an unbroken period of not less than six years.

Rev. Father Maloney, superintendent of Hamilton Separate Schools, reports that the introduction of moving pictures into the Cathedral School has proved an unqualified success, and announces that the other schools will be supplied with machines.

At the annual meeting of the Associated Boards of Trade of Temiskaming and Northern Ontario, it was decided to ask the Department of Education for larger grants for rural schools and for training schools in Northern Ontario. It was stated that twenty-four schools north of Liskeard were vacant last year for want of teachers.

Two-thirds of the schools in Hereford County, England, were closed on February 2nd because of a strike of the teachers for an increase in the minimum salary from $450 to $500 per annum. The National Union of Teachers guaranteed the striking teachers their full salaries for a period of five years.

The much-discussed question of religious education in schools has apparently been solved successfully by the authorities in Regina. The different denominations have agreed upon a system by which points of difference are eliminated.

The policy of interchange of teachers between the mother country and the overseas dominions has been inaugurated by the appointment of a New Zealand lady to the infants' department in a London school.

A wealthy citizen of Berlin, Germany, presented his fellow-citizens with $1,250,000 to be used in establishing a forest school for boys. The chief subjects to be taught are modern languages and the sciences.

In Cincinnati the Board of Education has opened all positions in the Public Schools to women, and has placed them on the same salary basis as men.

The repeal of the Coldwell amendments to the Manitoba Schools Act has been asked for in the Legislature. It was stated that the changes are so ambiguous that they cannot be interpreted satisfactorily.

The second annual Canadian Cadet Tournament will be held at Toronto on April 24th and 25th. The committee hopes for a large number of entries in the various events.

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was founded to carry on the work formerly done by the Arundel Society, viz., the reproduction in the most accurate colours of representative works by the Great Masters of Painting. The Society's Prints—in *colour facsimile*—range in price from $2 to $19. Some 190 MEDICI PRINTS, after 95 Masters of the Italian, English, Flemish, French, German and Spanish Schools, are already published.

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When writing advertisers, please mention THE SCHOOL.

In connection with Mr. Ellis's article in this issue, we publish illustrations of the new schools erected at Port Hope and Oshawa. The members of the staffs who are fortunate enough to work in these modern schools are as follows: Port Hope—Mr. Robert Gillies (Principal), Misses Strickland, Walker, Sing, White, Smith, Stratton, Purser, Dodd, Scott and McCallum; Oshawa—Mr. T. C. Tice (Supervising Principal), Misses Garrow, Lawlor, McLeese, Everson, Coulter, Kerr, Hawkes and Ellis.

Mr. Orlando Merriam Baker, president for the past nine years of the G. & C. Merriam Company, died on February 2nd, aged 81 years. He was for many years a popular Public School principal, and was at one time assistant superintendent of schools for Missouri. After leaving the teaching profession the prime interest of his life was the publishing of Webster's Dictionary. His strong work for the company was in connection with the educational field.

North Bay High School

Mr. P. W. Brown, B.A., Principal of North Bay High School, when sending the accompanying illustration, writes: "Secondary education did not receive in North Bay the attention it deserves until a year or two ago, when the High School Board, seeing the town progressing rapidly in other directions while education was almost at a standstill, decided to build a new High School. As a result we have a school premises valued at over $100,000. It is complete in all its appointments, and a credit to the town." Besides the principal, the staff consists of Mr. F. D. Wallace, B.A., Miss E. M. Code, M.A., Miss M. F. Ryan, B.A., and Mr. V. C. Quarry. The attendance has increased considerably, and it is expected that the school will soon attain the rank of a Collegiate Institute.

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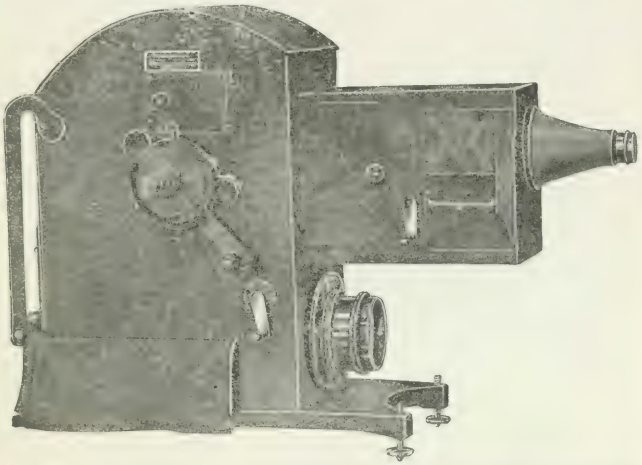

This instrument gives a combination unequalled in any other for ease and convenience in operation—for the utmost efficiency—and a wide range of capability.

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The value of the "Delineascope" is such that schools intending to instal an instrument should investigate it before deciding on anything else—it may be seen in our demonstration room in actual operation before a screen of ample size. All interested are invited to visit us.

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CHAS. POTTER, Optician, 85 Yonge St., TORONTO

We have received copies of the *Manual Arts Magazine*, a four-page journal printed and published by the boys of the Ottawa Manual Arts School. These boys would be glad to know of any other school which *prints* its own magazine. Mr. Arthur Crowson, the instructor in printing, is to be congratulated on the neatness and accuracy which he has secured in the printing of his school journal.

Miss Ruth Waite, of Rama Indian School, R. R. No. 2, Atherley P.O., writes: "I was interested in the International correspondence scheme dealt with in your December issue, and wondered whether any Canadian children would care to correspond with others in England. Girls might address letters to Miss Williamson, Longmoor Lane Council School, Liverpool, England, and to Miss Auger, Rice Lane Council School, Liverpool, England. Boys should write, care of Mr. Smith, Principal Birchfield Road Council School, and to Mr. Chesher, Longmoor Lane Council School, both of Liverpool, England."

A new course devoted to the methods of teaching Isaac Pitman shorthand and typewriting has been inaugurated at Columbia University. The class will be conducted every Tuesday and Friday from 5.15 to 6.15 p.m., in Room 601, School of Journalism.

Miss Lizzie A. Wilson, a recent graduate of the Faculty of Education, University of Toronto, is teaching in Rodney Continuation School.

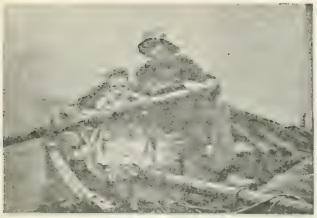
Teachers may obtain for their pupils an interesting booklet, "Jack", and for themselves an instructive circular setting forth the merits of Webster's New International Dictionary, by writing the G. & C. Merriam Co., Springfield, Mass., and mentioning THE SCHOOL.

Miss E. C. Tiplady, of Clinton, has been appointed Commercial Specialist in the Vankleek Hill Collegiate Institute.

Our printer was very unfortunate in his treatment of the advertisement of the Berlin Photographic Co. in our February issue. The picture should have been entitled "The Portrait of a Man", instead of the title given.

Mr. W. H. Shaw, President of Shaw's Schools, Toronto, has taken over the business of the British American Business College, Toronto.

Mr. F. H. Bell, English Master in the Windsor Collegiate Institute, is giving a course of instruction in some of his English classes on the use of books and libraries. High School pupils do not make as extensive and as intelligent use of the Public Library as one would expect. This may be due in part to lack of time or interest, but it is more probably due to a lack of knowledge of what the resources of a library are and how they may be used. The experiment is being tried in Windsor of giving a short course of about twelve lessons to show students where and how to find information on any subject. We think the outline of the topics,



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given below, is worth publishing:—(1) Outline history of book-making and libraries. How books are made; explanation of folio, quarto, etc. Good and poor book-making. How books should be cared for. (2) Dictionaries of Language. What we want from a dictionary: meanings, pronunciation, derivation, geographical and biographical names, foreign words and phrases, abbreviations. Merits of various dictionaries. (3) Dictionaries of biography, dates, quotations, synonyms, antonyms, etc. (4) Encyclopedias, general and literary; Who's Who, etc. (5) Gazetteers, guide-books, atlases, year-books, almanacs, etc. (6) Special subjects. (7) Book indexes, magazine indexes, indexes to periodical literature. (8) The card catalogue. (9) Theory of indexing. (10) The Bible: versions, histories, dictionaries, concordances, introductions, commentaries. (11) Government reports, association reports, etc. (12) Pictures. (13) Editions, book catalogues, beginning a library.

ALBERTA

J. A. Smith, B.A., Assistant Superintendent of Schools for the City of Calgary, has re-entered the service of the Alberta Department of Education as Inspector for the Calgary District.

G. F. McNally, M.A., has vacated the position of Inspector of Schools for the Calgary District, and is preparing at Columbia University to take up the duties of Principal of the Normal School at Camrose.

Dr. J. C. Miller, Principal of the Normal School at Camrose, has been appointed to the position of Director of Technical Education for the Province of Alberta.

W. G. Carpenter, B.A., has been appointed Superintendent of Schools for the City of Edmonton, to fill the vacancy created by the resignation of J. McCaig, M.A., LL.B.

J. W. Russell, B.A., of Camrose, has been appointed Inspector of Schools, with headquarters at High River.

Interpretative Art

"The pupil must come in contact with the noblest work of real art, and this is the point where the serious study and inspiring interpretation of works of art must play its part in the aesthetic school of instruction. Even small black and white reproductions can give all the essentials for the educative purposes if they are carefully chosen from the most excellent productions of artistic genius, presenting a large variety of subjects and a full variety of historic styles, and if, above all, the teacher induces an aesthetic attitude in the child."—Hugo Munsterberg, *Principles of Art Education.*

"Spring Song"

Lent by the Goupil Gallery, London.

By Archibald Browne, C.A.C.

For there is a perennial nobleness, and even sacredness, in Work. Were he never so benighted, forgetful of his high calling, there is always hope in a man that actually and earnestly works: in Idleness alone is there perpetual despair. Work, never so Mammonish, mean, is in communication with Nature; the real desire to get work done will itself lead one more and more to truth, to Nature's appointments and regulations, which are truth.

The latest Gospel in this world is, Know thy work and do it. 'Know thyself': long enough has that poor 'self' of thine tormented thee; thou wilt never get to 'know' it, I believe! Think it not thy business, this of knowing thyself; thou art an unknowable individual: know what thou canst work at; and work at it, like a Hercules! That will be thy better plan.

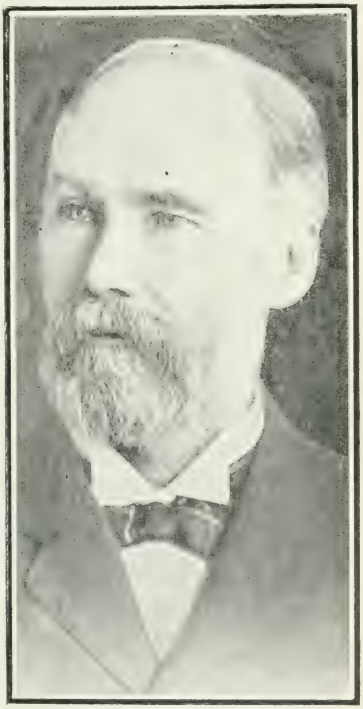
—Carlyle, *Past and Present.*

The School

"Recti cultus pectora roborant"

Editorial Notes

Sir George Ross.—Sir George Ross was the premier of Ontario, the leader of a great political party, and the first Canadian orator of his day. But the schoolmasters of Ontario prefer to remember him as one of themselves—a country school teacher, a county inspector, an inspector of Model Schools, and, at last, the Minister of Education.



Sir George's success as a teacher opened up the way to the county inspectorship and to parliament. From the front ranks of the county inspectors he was soon called to the inspectorship of Model Schools and from the front ranks of his party at Ottawa to the portfolio of Education in Ontario.

As Minister of Education from 1883 to 1899 Sir George did his best official work—the work by which history will know him best and longest. He came to office at an opportune moment. The administration of Adam Crooks, Ontario's first Minister of Education, had not been active. As the first to bring education formally into politics, he had moved very cautiously. To escape the charges of "Prussian despot" so often flung at Dr. Ryerson's head, he had either marked time or surrendered his

authority to the local districts. And so when Sir George accepted office many things needed doing in education, and the Province was eager to endorse him who would do them. With an industry and an enthusiasm almost unparalleled in our political leaders, Sir George did them.

Sir George worked and won against great odds. Some of these were personal. He was a poor man. Ontario has always paid her servants a beggarly wage, none more beggarly than that paid her educational officials. As Minister of Education Sir George never received more than $4,000 per annum. He was not an educated man after the manner of the schools; he had never attended a High School or a University. And yet he was called upon to fill the scholars' office in the government of the day! He fought fiercely to get knowledge and he won a mighty victory, but he won it at great cost—in travel, reading, and ceaseless study. And then his whole official life was a struggle against illness, that most painful of illnesses, rheumatism.

Others of his difficulties were public rather than personal. Sir George saw clearly, as Ryerson had seen clearly before him, that progress in education in Ontario could be achieved only through wresting power from the local educational authorities and centralising it in the Department of Education at Toronto. And though contrary to the traditions of his party, he struggled throughout his official life to do this thing. No cries are so dangerous to the Canadian administrator as the cries of creed and race. Not once or twice but half a dozen times during his sixteen years of office Sir George was called upon to solve in their ever shifting forms the problems of the Separate Schools and Bilingual Schools. Indeed these problems always confronted him and they always craved wary walking. Moreover, the Province was not wealthy. Though he legislated ever so wisely Sir George could not always execute, as the provincial treasury was either empty or pledged to the tradition of a fixed surplus. Sir George was permitted to make progress, provided that the progress did not cost much. It is certain, too, that Sir George's hand was stayed in the larger part of his administration by Premier Mowat who was never too enthusiastic about public education and in the last years by the Liberal party itself, which had now become so weak as to make aggressive action seem suicidal.

Despite all opposition Sir George won out. To the industry and enthusiasm with which he began, continued, and ended his work, he added an ambition which drove him irresistibly to do things that the Province might notice and commend, and a real passion for uniformity and completeness in methods of organisation. He organised the kindergarten at one end of the educational ladder and the university with its professional schools at the other, creating thus, as he loved to say, a straight and easy way from kindergarten to college. Into the gaps

between the lowest and highest rungs of the ladder he inserted fifth classes, continuation classes, night classes, and upper high school classes. He filled out Ontario's scheme for training her teachers, perfecting the Model Schools of his day, professionalising the Normal Schools, and creating at the ends of the educational system agencies for training kindergartners and for training High School teachers. Before he left office he could boast that the expert reigned in every public educational institution in Ontario. He achieved what earlier statesmen had come to think impossible—the federation of the universities. And he united those universities with the high schools in a graded, uniform, and highly efficient system of public examinations. He created art schools and free libraries, reconstructed the text book system, enacted truancy laws, added realistic studies to the school curricula, settled the separate school question for his generation if not for all time, and was proceeding somewhat slowly to organise instruction in agriculture and the industries when he was called to the premiership.

During the last two or three years of his life in the Education Office, Sir George seemed at times to halt and even retreat. He was too cautious to outstrip public opinion. Moreover, money was scarce as we have said, his party was losing ground, and the shadow of the approaching premiership was upon him and restrained him. It is not by these years, however, but by his earlier and creative years that we must judge him. Judged thus, he ranks among our greatest.

Waste in Education.—A reader of THE SCHOOL with a bent for figures has become interested in the question of waste in Education. He expresses his conclusion somewhat as follows: "The average Canadian boy passes less than seven years in school. Making reasonable allowances for Saturdays, Sundays, and holidays, and for noon hours and intermissions, that average boy gives about three hours *daily*, to actual school work. But this estimate makes no allowances for irregular attendance. Accepting the official average of attendance as about 55 per cent, that average boy gives less than one and three quarter hours daily to school work. During this period, moreover, he shares the teacher's ministrations with 30 or 40 other pupils and he disperses his own energies over pursuits some of which, to say the least, are not productive. Put a stop watch on this average boy and it will be found that he spends twenty-five minutes daily in the empty intervals between subjects and more than forty per cent of his time in emptier intervals of feet-scraping and window-staring. With such deductions the average boy is left with little more than one hour per day, during which he works at full pressure. The gap between the ideal six hours and the real one hour is the measure of a great waste in education". Is there truth in this conclusion?

Rural Schools.—Inspector Lees of Peterborough, Ont., completed in February in *Farm and Dairy* an able series of four articles on the rural school problem. His statement of the problem, and of the Consolidated School as a partial solution, is unusually effective. To some of his conclusions THE SCHOOL hopes to refer later at greater length.

Inspector Lee's citation of figures in his plea for more money for rural schools is startling, and none the less so because true. In 1911 the Public Schools spent $37.48 on each city pupil, and $17.64 on each county pupil. Was this fair or wise? Ontario spends annually 28½ millions of dollars on liquor, twenty-one millions on tobacco, and only $10,800,000 on Public Schools! One dollar for education; almost five dollars for smoke and drink! Do we *believe* in education?

Extension Department of Texas University.—Dr. S. B. Sinclair who retired recently from the professorship in Education at Macdonald College, Quebec, in order that he might have more leisure for the investigation of the rural school problem, is pursuing his inquiries through the Southern States. From Austin he sends to THE SCHOOL the following interesting note on the work of the University of Texas.

The Texas Farmers' Educational and Co-operative Union which, by the way, is a Society with a password, held its annual meeting at Fort Worth, on January 14th, with eight hundred farmers present.

The meeting, by a unanimous vote, expressed its appreciation of the work done by the University Extension Department at Austin and decided to print and distribute copies of an address on "the university and country life," delivered before the Union by Professor Brawley, director of the Department of Education and formerly State Superintendent for Texas.

The University Extension Department in Texas University is quite new and interesting as one of the many forms of activity recently introduced into the United States with a view to assist in the solution of the so-called rural problem.

The Department has for its aim the industrial, social, intellectual, moral and religious betterment of the State and is rendering good service to the schools both city and country, to the various vocations especially that of farming and to other enterprises.

There are seventeen expert workers in the departmental divisions of correspondence instruction, public welfare, public discussion, public lectures, home welfare, child welfare, and information and exhibits.

The correspondence division offers, through correspondence and lectures about two hundred courses of college grade including practically every subject.

Similarly other divisions deal with such activities as city and rural sanitation, household science, the treatment of delinquent and feeble-minded children and the remodelling of old school-houses.

Some divisions conduct researches into the industrial, economic and educational conditions of the State and have already collected a large amount of valuable material. This material, together with up-to-date knowledge on various topics, is being placed at the disposal of the public in attractive form, by means of charts, photographs, diagrams, libraries, etc.

The department also organises school debates, athletic competitions, and clubs of various kinds throughout the State, free of charge.

Suggestions for the Class-room

Geography Methods.—At the beginning of the term I hung in the room a large postal card rack and asked each pupil to bring a view of some interesting place and tell us about it. We soon had a very interesting collection which visitors admired and which the pupils were always anxious to tell them about.

Our classes were organised into a geographical organisation, the object being to find out something new or odd about the earth. Every two weeks the association met on Friday and discussed what we had learned, and each pupil would strive to find a more curious bit of information to give than the others.—*Primary Plans.*

Busy Work for the Little Ones.—In ungraded schools, and in schools where there are several grades in the same room, it is often difficult to keep the small children employed while the teacher is busy with other classes. I have taught in such schools, and my brain was sometimes much exercised to devise work for the restless little minds and fingers. Sometimes I would gather leaves from all the trees and plants around. These I would distribute at the various desks. The pupils were told to trace them on blank paper and then cut them out. I kept patterns of animals, trees, women, men, children and birds and barnyard fowls, and let the children trace, cut and colour them. This exercise not only kept them busy, but taught them exactness and painstaking. I always had the best work mounted on paper of a shade to best bring out the colour of the cuttings, with the name of the owner in the lower left hand corner, and it was placed on exhibit at the end of the school term.—*Primary Plans.*

Retardation in Public Schools

THE problem of "retardation" is one of the most difficult with which Principals and Inspectors of Public Schools have to deal.

As a consequence of retardation a large percentage of our Public School pupils drop out before completing the course. The age of 14 finds them still in grades 4, 5, 6, or 7, and few of these make any further effort, so that they leave school without having received an education which will be at all valuable to them in after life.

If a Principal or Inspector will investigate he will be astonished at the number of pupils who are too old for the grade in which they are found.

Having secured the names of the over-age pupils, the next step for the Principal is to examine their registration cards. These should show the age at which each pupil entered school, the length of time spent in each grade, and the regularity of attendance of each.

This examination will reveal a number of causes of retardation some of which can be removed and others lessened.

It will be found that a considerable number of pubils do not enter the primary grade before they are seven or eight years of age. Some of these may have been immature and were unfit to begin the work at six but many of this class of children will be found to be normal in strength and ability and it is the Principal's duty to see that such children be given the chance of rapid promotion, especially in the primary and intermediate grades.

Another cause will be found in the irregularity of attendance of many pupils. This irregularity depends generally upon the health of the child or upon his home surroundings. In some cases the teacher is not able to improve matters, but, generally speaking, the teacher who takes a personal interest in her pupils has very few cases for the truant officer to investigate.

A change of school during the year is often the cause of a pupil's repeating a term in the same grade. No two schools can possibly be perfectly uniform and teachers should deal sympathetically with transferred pupils and give them every possible assistance to enable them to secure a good standing in the new form.

In most graded schools, it will be found that pupils spend too much time in the Primer or grade I. This is due to a number of causes which are remediable. Primary classes are almost invariably too large. For a teacher to do good work in a primary grade her enrolled attendance should not exceed 40, and it would be better for all concerned if the number were

limited to 36. If circumstances require any forms to be overcrowded, let the overcrowding be in the upper grades and not in the primary ones.

In spite of the Regulations of the Education Department too much number work is still attempted in the primary grades of many schools. Much valuable time is in this way wasted and pupils suffer thereby. Principals and Inspectors can easily remedy this defect.

The Kindergarten course must be revised. If it were thoroughly reorganised and the course made to include the elements of reading and writing, it would materially lessen the time in the primary grades.

In all of the grades, in the average school, too much time is devoted to arithmetic. Teachers in the Second Book grades fail to realise that there is one standard in their forms for accuracy and rapidity of work and quite a different standard for the Senior Fourth grade. Many teachers in the Second Book grades waste time in trying to attain to a standard in accuracy and rapidity that is beyond the ability of intermediate pupils. An acquaintance with the Curtis tests in arithmetic would prove beneficial in this respect. Experience has shown that quite as good results are obtained in arithmetic by giving 175 minutes per week as by giving 300.

Spelling as well as arithmetic is a prolific cause of retardation. Some pupils should not be kept back because of failure in this subject, and in most schools too much time is devoted to learning how to spell words entirely beyond the vocabulary or the understanding of the pupils.

Where at all possible, a special teacher should be added to the staff of every large graded public school. She could give invaluable help to pupils who have fallen behind on account of absence from school or other causes. Vacation schools are becoming more and more popular in the American cities, and retarded pupils, benefit most thereby; Ontario schools must not lag behind.

Possibly the most important of all remedies for retardation is to have not an easier method of promotion but a more *flexible* one. Too many pupils who ought to be promoted twice a year are kept in a grade until the June examinations come about. The teacher too often keeps her mind upon the whole class when in reality she should be thinking about each boy and each girl.

It is encouraging, however, to see that all progressive schools, at least, have discarded the vicious system of a final promotion examination set by some one other than the teacher concerned. She surely knows best if any of her pupils are unfit for promotion and in my experience it is only a final examination that promotes unfit pupils, and not the teachers entrusted with the work.

Another feature that the Principal should not overlook is the possibility of many of the brighter pupils skipping a grade in the lower and

intermediate forms. In some of the best American schools fully one third of their pupils skip one of the eight grades during their school course.

A pupil's progress is likely to be more rapid if there are two grades in a room instead of only one. In the primary grades the teacher is compelled to have two or three divisions in order to do good work. In the other grades the success of such an organisation depends upon the teachers. The strain upon the teachers, particularly in the upper forms, is much greater with two grades than with the single grade, and, unless more male teachers enter the profession, it is doubtful whether this form of organisation will prove a distinct success.

Teachers, as I have tried to show, can do a great deal to prevent retardation but in spite of all their efforts there will still be a considerable number of pupils who cannot complete the Public School course by the time they reach the age of fourteen.

To give these an education that will prove beneficial to them throughout life a special course with an industrial trend will have to be devised for them.

INSPECTOR.

Suggestions for the Class-room

Testing Results.—To test the progress of ideals in children is evidently the most difficult of all. Even here the observant teacher may know whether she is making progress. Children can be studied better at play than at work, for a boy plays as he likes and works as he must. Here his conduct and conversation will disclose what he likes and dislikes. and upon this basis fairly accurate tests may be made from month to month. If a boy in play to-day shows a spirit of fairness manifest in one act that he did not show a month ago under the same circumstances, it may be taken as evidence of progress in ethical conduct whose source is his ideals.—Geo. H. Tapy in *Educator-Journal.*

Effective Punishment.—Punishment by ruler is an unheard-of thing in our first grade. The children are only babies, and a great many times are naughty when they mean to be good. In our school, tags are used if the children are late or naughty, and are made this way: Take a square of paper and write the word "tardy" or "naughty" upon the paper. We use green crayon for a very naughty child, yellow for slighter punishments and black for greater ones. These are pinned on the children. Then under my desk is "prison", and every child hates to go to "prison" even if it is only for a short time. We never need to use the ruler.—*H. J. R., Rhode Island—Primary Plans.*

Devices in Number Work

MARGARET D. MOFFAT,
Bolton Avenue School, Toronto,

A PROMINENT educator once overheard a teacher exclaim after a particularly live lesson, "If I could only get a response like that whenever and whatever I teach!" He said, "If all teachers could, the millennium in education would come". This sounds as though it were the fault of teachers that it is not here now. Well, the millennium in teaching is not here, any more than it is in any other department of life. If it were so, children would be like any machine which responds to the dynamo, just machines. Instead, they are human and the teacher is human. After every effort there is exhaustion, and there is nothing so fatiguing as interested absorbed attention. Class-attention depends upon so many things that may be quite beyond the control of a teacher, even though she may be at her best and have her part of the lesson at *its* best. What the children ate for breakfast, whether or not they had a breakfast, whether they were up late the previous night and had insufficient sleep, whether they are not customarily put to bed early, whether something exciting has occurred at home or in the neighbourhood—any of these, or of many more may be reasons for inattention to any lesson. As for response, often upon the asking of the most simple question by the teacher, the mere fact of his name being called in the presence of his classmates, is enough to "waterproof a child's mind"; again, often he thinks the right reply but is afraid to give it for fear it may be wrong; or, she may be too shy to give it even though she knows it is right. And there are others forever ready to answer till you wish they weren't.

So that when it comes down to getting the "rudiments" into the minds of children, especially backward children (and at least two-thirds of them are backward in learning the rudiments), class teaching and fine questions have to give way to personal work, giving much practice, and letting it all "wear in."

It is for this the teacher needs strength of body and spirit. I once heard a minister, in a prayer offer a petition for strength just to "KEEP ON". I pass this thought to the young teacher intense in both enthusiasms and discouragements, to the experienced teacher, growing weary from lack of variety and with no means of getting it.

The work outlined here is for the girls' beginning, in places where there is neither book nor body to be consulted.

Make good use of the Manuals sent by the Education Department to each school. It is so easy to throw blue books upon a top shelf and leave them to the mice or the dust. It is said that Florence Nightingale's working library was composed of Blue Books. In Ontario, teach the adding combinations in Arithmetic according to the Ontario Blue Book. This is the order:

(1).

1	2	3	4	5	6	7	8	9
+1	+2	+3	+4	+5	+6	+7	+8	+9

(2).

9	8	7	6
+1	+2	+3	+4

(3).

2	3	4	5	6	7	8
+1	+1	+1	+1	+1	+1	+1

(4).

3	4	5	6	7	9
+2	+2	+2	+2	+2	+2

(5).

4	5	6	8	9
+3	+3	+3	+3	+3

(6).

5	7	8	9
+4	+4	+4	+4

(7).

6	7	8	9
+5	+5	+5	+5

(8).

7	8	9
+6	+6	+6

(9).

8	9
+7	+7

(10).

9
+8

The combinations in (1) are known as the doubles, in (2) the tens. These along with those in (3) and (4) are taught to Junior Firsts. All the others to Senior Firsts. And, if you have never before thought about it, think now, that eighty-one combinations of numbers is a load for the memories of little children who have never before been compelled to remember anything. 9+1 and 1+9 are two different things to a child. Besides, there are also eighty-one separations of numbers in the operation of subtraction.

There is often too little use made of objects in teaching number-work and not enough variety in the objects used. Have the children bring all the empty spools from home. They are easy to handle for class-work. If you have the opportunity you might throw your collection of white spools into diamond dye, making two colours. The wood should colour well. Use also beads, marbles, sticks, large seeds and buttons. Checkers are good. Have the children bring all the card-board boxes they can get from home and the village store. Break these at the creases. They will "come good" for many things. The narrow edges can be cut into tickets for words or letters. On the card-board of shoe-boxes paste the number-pictures, cutting the spots one inch in diameter from coloured paper if you can get it. If not, colour white paper spots with crayographs. In a set of cards for the number 7, one card has six red spots and one green, another, five red and two green, the other, four red and three green. Cards like this are very good for drill in adding and subtracting. All the classes up to the Third can be drilled together with them.

Build the adding sums always from the bottom up, units column first, with as many figures as you want, then the tens from the bottom up, then hundreds and so on. When the children know the doubles they can make up their own columns for busy work. Tell them to start a column with 1, another with 2, another with 3, first telling you what figures to put down as you make one on the board. They must know exactly what to do. A frequent cause of disorder is that they don't know exactly what to do and when they reach their seats they worry one another about it. When they see what is to be done they can make columns like these.

You see, there is no number to put with the one below, as you climb the ladder, but the double of the units figure in the last number you reached. Eight or nine figures in a column are quite sufficient.

4	8	2	6	6	8
2	4	6	8	8	4
6	2	8	4	4	2
8	6	4	2	2	6
4	8	2	6	6	8
2	4	6	8	8	4
1	2	3	4	9	7
1	2	3	4	9	7

On Friday have a relay adding-race for all the juniors below Junior III, the children using just the doubles. Let the little ones start the column and the older ones finish, the pupil who puts on the top number, places the answer at the bottom. Columns can be made using the tens in pairs, and columns with the doubles and the number which makes ten, alternately.

			2	4	6
2	8	9	9	3	2
8	2	1	9	3	2
7	3	2	2	4	6
3	7	8	9	3	2
5	5	3	9	3	2
5	5	7	2	4	6
6	1	4	9	3	2
4	9	6	9	3	2
40	40	40	60	30	30

Senior First classes can make up two-column sums or three, building from the bottom upward, units first. The bottom figure of the tens column is the mate to the carrying figure. There is no good reason why children should not keep a list of their carrying-figures. It is done in business and saves time when testing accuracy. The list should be placed at the side of the sum, never underneath the columns. In making sums with the ten-combinations or tens and doubles they will be like these. The mate to the carrying figure completes a ten.

928		415		798	
183		694		628	
357	3	576	3	794	5
754	–	533	–	798	–
566	4	257	4	628	5
545	–	851	–	794	–
675		679		798	
				558	
4,008		4,005		5,796	

After the long holidays every year start the mechanical adding sums of Junior Seconds and of Senior Seconds back at the beginning with the tens and the doubles. Each day, give sums containing a new combination (an old-new one) with those taken on previous days. You may have to spend several days on each. Number-concepts fade quickly! When you see the children counting, on fingers with dots, or strokes, or nodding heads over the adding, you know that the concept has gone. Go back to objects and one-step work again. The best prevention and cure for counting is frequently to require the pupils to make their own columns. The work cannot be so quickly inspected as when you dictate it, but the result is worth the trouble. For example, when you have finished drilling on 11 or 12, tell the class to make up some adding sums of four columns, nine figures each, using the pairs of numbers in 11 or 12, alternately with a number to complete a ten.

They will make these:

(1).		(2).		(3).	
7899		9932		8868	
4399		5339		8485	
9932		3495		6857	
4989	6	3443	4	6878	6
7294	–	9943	–	8486	–
9997	6	2339	4	9846	6
2529	–	4496	–	3988	–
9695	6	5443	5	8383	6
4456		5632		6469	
61,190		50,062		68,260	

Nothing is gained by giving children below the Third Class, sums larger than these. The sustained mental effort tires them and they drop into counting.

Keep a permanent Arithmetic note-book, making up fresh work each evening, upon the combinations taught, until you have a supply to do all your teaching-life. At the top of each page, indicate the combinations that are in the sums on that page, so that you can readily turn to them. Record also the dates when they are used.

Suggestions for the Class-room.

Teaching the Permanence of Law.—The school through its organization and by means of its curriculum has a great opportunity to teach the permanency of law effectively. Its orderly method of procedure, its justice administered impartially to all, and the relations established in everything studied, unite to teach the importance and the permanence of law. If the school consciously directs its efforts toward this end, those who go out from its influence will be free from superstition and will not be surprised at the operation of law.—Robert J. Aley in *Educator-Journal.*

A Picture.—The schoolroom was tidy and attractive, cosy and homelike. It was well heated, well lighted and well ventilated. The floor was clean, the walls were adorned with a few beautiful pictures. On the board were well organised assignments, and a few "Gems of Thought". On a table were some flowers, the desks were clean and suitable to the pupils. The pupils had bright eyes and rosy cheeks, clean hands and clean faces. They were quiet and orderly, kind and obedient. They sat erect, they were mannerly and above all they were interested. Their minds were at work grasping the thought that was being presented. The teacher stood before the pupils. She was dressed neat and clean and her hair was well arranged. She was kind and firm and had a well modulated voice. She had her subject-matter well organised. She asked developing questions, she did not waste time on non-essentials. She kept all pupils thinking all the time. She developed the subject-matter given in the assignment. She saw the end from the beginning, and she so skilfully directed her work that she got the greatest possible amount of thinking from every child, in grasping the subject-matter. She had the power to hold pupils to their work and to good conduct without a visible effort.—L. E. Swails, in *Educator-Journal.*

Living Our Geography

ETHEL M. HALL,
Public School, Weston.

"I met a traveller from an antique land
Who said; Two vast and trunkless legs of stone
Stand in the desert. Near them on the sand,
Half sunk a shattered visage lies, whose frown
And wrinkled lip and sneer of cold command
Tell that its sculptor well those passions read
Which yet survives, stamp'd on these lifeless things,
The hand that mocked them and the heart that fed;
And on the pedestal these words appear:
'My name is Ozymandias, king of kings:
Look on my works, ye mighty, and despair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare,
The lone and level sands stretch far away."

Shelley.

"HE who has once tasted of the waters of the Nile, will surely return to drink from them again," is a proverb which will be true of some at least of the pupils in form I, if interest in "Egypt" is any indication. I hope that many of them may be able to study at first hand the wonders of that great far-away land, which was old in arts and crafts when Europe was a wilderness, inhabited by wild animals and savage men.

We began our study of Egypt by comparing its climate with that of Arabia, which we had studied in December.

The pupils had not forgotten their study of desert life and they could easily form an idea of the sandy waste stretching on each side of the great river Nile. Thus our knowledge of Arabian life gave us a basis upon which to work. Descriptions of deserts, oases and monsoons were easily recalled. Vivid indeed were the word-pictures of a traveller's plight when caught in a sand-storm.

Then again the animal life of Egypt was somewhat similar to that of Arabia. The life history of the donkey and camel were reviewed.

Plant life in this hot climate was compared with that of Arabia. The usefulness of the date palm was noted.

A talk about the life and habits of the ostrich with the story of "Jack and the Ostrich", finished our review.

Then we were ready for our *new* work.

"Some of you boys and girls are only five years old; some are six and others nearly seven. You know that it is one year between one birthday and another. Let us suppose that you had one hundred or one thousand or two thousand or even six thousand birthdays. How old is the oldest man or woman whom you know? Let us suppose he or she is one hundred years old. Sixty lives, (one following another) of one hundred years each, will give you a little idea of the age of this ancient land of Egypt where we will spend this month.

Long, long ago, before our country was discovered and long before England and many countries like Switzerland, which we studied in November, were known, there lived in the land of Egypt a people who were wiser than any then living.

The Bible says that Moses was learned in all the knowledge of the Egyptians; which included the art of building beautiful temples, magnificent palaces, splendid obelisks or monuments, and wonderful pyramids constructed of huge blocks of stone. In all the search by our wisest men throughout that country, we have been unable to discover with what machinery they were put together. Vast indeed are the ruins surrounding the ancient cities of Thebes, Memphis and Heliopolis, in those days called the City of the Sun.

Let us imagine we have taken the long voyage across the Atlantic Ocean and Mediterranean Sea and are landing at Port Said, the entrance to the Suez Canal. Here we take train for the run through the hot sandy desert to Cairo.

The Pyramids are our goal, for:

"The very first thing a traveller thinks,
Is about the Pyramids and the Sphinx."

We choose between a donkey and a camel for our five-mile ride along the tree shaded avenue built by General Kitchener.

When we reach the Pyramids we are lost in wonder at their size and grandeur. The largest Pyramid covers twelve acres and has many rooms which were the tombs of the kings of Egypt. Some of the rooms are furnished beautifully.

Some of the mummified remains of the kings still remain as they were placed in their red marble caskets, thousands of years ago, but *very many* have been carried away to adorn the museums of many lands.

We must look upon the *Sphinx*, that mammoth lion with the head of a man which has watched the sun rise over Egypt for thousands of years. "It lies partly buried in sand, as if the desert, jealous of the ever-increasing stare of the tourist, would fain bury its favourite child from the curious." A temple is said to be below having been quite covered by centuries of drifting sands.

Regretfully we leave the Pyramids and the Sphinx and ride back to Cairo. Our little donkey-boys chatter and call and the beggars by the wayside cry out for "backsheesh", as we pass along.

The ride has wearied us so we rest until another day.

Cairo is interesting enough for a day's lesson, so we visit its museums, and thread our way through its narrow, crowded streets in our effort to reach the bazaars where we buy our souvenirs of Egypt. Up the hill we go to the Old Mosque. We are surprised to find that we cannot enter till we have covered our shoes as we are not Mohammedans. The great bridge over the Nile with its splendid guarding lions interests us, as does the big dyke which conserves the waters of the Nile and brings them to the industrious "fellah" tilling the land, which needs nothing richer than Nile water and sunshine. The picture language of these ancient people we delight to examine, as we know it explains all that is known of the lives of a people who had reached a high state of civilisation.

"Through the low flat country all the while,
There flows the deep, wide, yellow river Nile."

The *Nile* required more than one lesson to exhaust all the interesting facts connected with it. The birds upon its banks; the fish and animals in its muddy waters; the house-boats upon its surface all demanded our attention.

"The rosy ibis-bird stands there and feeds,
On little fish upon the water-weeds,
And you might meet upon the river-rim
The Crocodile,—You would not care for him!

A lesson upon the "Monster of the Nile" is most thrilling. Some of the children have seen either live specimens or those in cases at the Exhibition.

Stories of days when beautiful girls were thrown to the crocodile to appease the wrath of the "God of the Nile," when the river refused to overflow its banks and send its rich waters to fertilise the soil of the farmer, were related. In contrast was told the story of the feast of the "Bride of the Nile", where a pillar of earth is substituted for the young girl and a gay, ribbon-decked boat is sent down the Nile instead of the human sacrifice.

Other Egyptian festivals were described, such as the "Ne seem" or Springtime feast, and the Wefa-en-Nell or feast of the overflow.

Home life and child life in modern Egypt were studied. Legends of the Nile, such as "Rhodopis and the Little Red Slippers", which is the Egyptian version of the old fairy tale of Cinderella, were told.

The pupils were asked to prepare the life of Moses in Egypt and some very interesting accounts were given.

As February advanced the interest grew and the pupils brought pictures of pyramids taken from current magazines, showing that they are not too young to observe.

Simultaneously the work on blackboard and sand-table grew. The first was the work of the teacher showing scenes in Egyptian life in the home, city or upon the desert. The second was the work of the children, and was the visible expression in sand, paper and plasticine of all the pupils had gained in knowledge of Egyptian life.

So the *Past* and the *Present* met for one month in our school-room in the study of this wonderful, historic country where the energy of the British is making the desert "blossom as the rose".

As Ye Sow

Many people wonder why school teachers age so early and rapidly. The following are some excerpts from the harvest which one pedagogue reaped from her sowing, and will, in a measure, explain her despair:

"Lowell was born in Cambridge at his old home Elmwood."

"Whenever a knight started out on an errant, he was called a knight errant."

"Geology treats of the interior of the earth and the exterior of the earth and the historical events of its future."

"The divisions of geology are structional, dramatical, and hysterical."

"Oliver Wendell Holmes was a man of good ideas, a few of which are exposed in his works." —Ruby Baughman.

Pupils' Answers reported from Penetanguishene Third Book Class: "The sailors made barrels of turmoil out of the whale's carcass." "The sermon on the surmount was very good." "A rumour is a person who boards with some one else." "The belted kingfisher has a brass band and lives on insects and germs."

Miss C. is a fat teacher, Miss M. is thin. The other day Miss C. had an errand to Miss M.'s room. When she had gone, a boy sprang excitedly from his seat, "Miss M. is that Miss C.?" "Yes." "Well, my brother's in her room an' he says the fatter they are the nicer they are, an' I say, the skinnier they are the nicer they are!"—*An Incident reported from a Toronto School.*

School Decoration and Picture Study

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SO much material is now available for the decoration of schools, and for the study of the Art of the world, that those who have had the matter at heart for many years are no doubt satisfied and pleased. There is also a very gratifying interest being shown by all educationists, and the subject bids fair to take an important place in every grade of our schools, from the kindergarten to the university. The pioneers of the movement knew what an educational force lay in the influence of pictures and the knowledge of Art, and by their persistent efforts have now the satisfaction of seeing the subject made one of regular study in our educational system. The first effort made in Canada appears to have grown out of the Rosedale Ladies' League of School of Art organised in 1896; and when in 1898 the League appealed to the Ontario Society of Artists for co-operation they met with such immediate response that in a short time a Central School Art League was formed for the city of Toronto, which besides assisting in the organisation of a number of local leagues in various schools, scattered information upon the subject as widely as possible.

One of the efforts in this direction was the publication of a pamphlet under the auspices of the Education Department in 1899 which was distributed throughout the schools of the Province. This pamphlet gave a brief account of the movement to that time, showing how the Boston School Committee in 1883 was working along the lines of the English movement headed by Ruskin, and also noted the first organisation of a Public School Art League in Boston in 1892. According to the recently-published annual report of the Art for Schools Association of London, that body has been in existence since 1883, and is at the present time the central institution for the distribution of pictures suitable for school decoration and Art study at the lowest possible prices. They also undertake the publication of material specially needed for Art study in schools.

Since the time when the first efforts were made to arouse interest in picture study, the idea has grown to such an extent that now the problem is how it may be controlled. When it is first acquired the power to gratify freely the taste for pictures seems to have its baneful effects in this as in other ways, and some regard the coming popularity of the movement with trepidation. This, however, is a phase of development

which we must experience and endure until enlightenment brings a higher standard. There are signs that efforts are being made to avoid mistakes, but it is astonishing how the principles of pedagogy are forgotten when enthusiasm runs high, and in a matter as delicate as this, and requiring such careful and experienced advice, woeful blundering is possible.

Excellent advice is given in various works recently published, although one must admit that there is much being written on the subject that is sentimental and superficial. The hope for right development lies in the education of the teachers and, happily for Ontario, this has begun in many ways. One of the most important of these is the recent publication by the Education Department of a pamphlet on the decoration of schools and picture study, prepared by a committee appointed by the Ontario Society of Artists at the request of the Department.

To set forth the ideally perfect example may be futile from one point of view, for it may not be possible of attainment; but this is the only true starting point, and if this ideal be kept constantly in mind the enforced adoption of temporary measures and makeshifts may be both good art and good pedagogy.

In the ideal example the requirements are that the school building should be appropriately designed, tastefully coloured, and the walls decorated with specially designed mural paintings and sculpture in such places as are suited to the placing of permanent works. The walls of the different rooms should be hung sparingly with large sized reproductions, examples of the best art of the world, both ancient and modern. The character of the works placed in the different rooms and sections should be suitable as far as possible to the age of the pupil, but care should be exercised not to overdo the matter of grading. The reproductions of pictures should as far as possible be in colour, but made only by the best mechanical processes, as hand-coloured prints, however beautiful, can never produce the quality of colour and tone of the originals. Comparatively cheap colour prints are sometimes excellent reproductions if made direct from the original work, while half tone prints, although costing almost nothing, may be very true as reproductions, and in the ideal school may be used without stint when made from good photographs. The plaster cast constitutes almost a perfect form of reproduction for sculpture, but in this as in all other processes of reproducing works of art, there is a danger that the copy may be many times removed from the original. These casts are difficult to arrange in a scheme of decoration because of their whiteness, and should be finished in ivory tones. Great care should be taken to have the frames of the pictures simple in form and not too heavy. The colour and tone should harmonise with the walls and woodwork of the rooms. The hanging of the pictures is also

very important. They should not be hung too high, and should lie as flat as possible against the wall. There should not be too many on a wall, and much study may be brought to bear on the question of symmetry in grouping. While the foregoing conditions are being given attention, it is also necessary that there should be some order of arrangement, according to periods, whereby the study of the history of Art may be facilitated. For the more particular study of the history of Art and to complete this ideally equipped school from the decorative and art study point of view, cabinets should be provided for storing a large number of prints representing the history of architecture, sculpture and painting, and there should be a compact and well selected library of art books.

As no school having such ideal conditions exists or will be possible for some time to come, make-shift and temporary measures must obtain in varied degrees. Every school will have its special problems to be dealt with, but as a rule these problems may be classed under a few heads.

The common and foundation problem is how to deal with poor architecture to make the effort to decorate seem worth while. The woodwork may be badly designed, or of that kind which is worse than no design, a mixture of cheapness and pretension. When this cannot be altered because of the cost, a coat of paint is possible in almost every case. A subdued tint will cover a multitude of sins of bad design, and at the same time satisfy the demands of sanitation. Walls can be calsomined if papering or painting is too costly, and pictures may be hung to cover imperfections.

Another general problem to be solved in the attempt to make the best possible use of limited means is how to spend a small sum of money in the purchase of pictures. As a rule the collection of funds for this purpose has cost a great deal of effort, and there is either great fear of making a mistake, or there is too much assurance.

A high regard for pictures may lead to the conclusion that the most costly are the best. This may happen to be the case, but some kinds of reproduction such as hand-coloured prints, etchings, and engravings of well known pictures may be beautiful in themselves and excellent as works of art, though for educational purposes photographs and prints mechanically reproduced from the originals are much to be preferred.

For the wise expenditure of money in the selection of prints, some knowledge of the processes of mechanical reproduction is necessary. When this is known, it becomes quite clear that if only a small sum of money is available the cheaper prints may be purchased, and although the matter of size and permanency is a consideration, this should count only when funds are unlimited, the object being in every case to get a sufficient number, and to make a representative collection of the various schools and artists.

In this connection the desire to possess particular pictures should be restrained if their inclusion merely duplicates the name of an artist already represented, or does not coincide with a plan laid down for the formation of a collection. There should also be restraint exercised regarding the common desire that a picture should be pretty or pleasing. These are very often the sole reasons for the choice, but knowledge of the art of the world will bring a new outlook in this as in other forms of education. Children as well as more mature students should have only the best art placed before them for study, or for any kind of contemplation; they should be taught what to look for in a picture, and while it must have enough subject matter to interest, and to come within the comprehension, one must remember that the child is being brought to the picture as well as the picture to the child.

Schoolboy "Howlers" from the University Correspondent

The courage of the Turks is explained by the fact that a man with more than one wife is more willing to face death than if he had only one.

Milton was called the father of English poetry because he was blind and his daughter did the writing for him.

James I. claimed the throne of England through his grandmother, as he had no father.

Genae puellae formosae sunt—Beautiful girls are cheeky.

Petit maria.—Little Mary.

Fulminantis magna manus Iovis.—The thundering big hand of Jove.

Il ne faisait rien sans but.—He did nothing without a drink.

A triangle is a square with only three corners.

A problem is a figure which you do things with which are absurd, and then you prove it.

Air usually has no weight, but when placed in a barometer, a square inch of it is found to weigh about fifteen pounds.

Q.—Under what conditions will a body float in water? *A.*—After it has been in the water three days.

The Minister of War is the clergyman who preaches to the soldiers in the barracks.

Ambiguity means telling the truth when you don't mean to.

An anachronism is a thing a man puts in writing in the past, before it has taken place in the future.

The Flannelette peril means petticoat government.

Our School Garden

MABEL O. HOWARD
Public School, Elgin, Ont.

EVERY teacher realises what an important position "interest" holds in school life. Now to all boys and girls their own experiences are the most absorbing topics and for this reason the teacher tries to relate each new lesson directly, if possible, to some previous experience of the child. In our country schools most of the children are from farm homes, and to a child suddenly transplanted from green fields to a world of words and figures, in no way related to his home experiences, school life is apt to become irksome. He may keep his eyes glued to his book, but his thoughts are with the bay colt in his father's pastures or the spotted calf that never seems able to drink the pail of milk without knocking it over. Besides, children, and especially boys, take a lively interest in life. They want to be where things are being done and this spirit will work itself out, if necessary, in mischief. Why not, then, turn this activity into better channels? A school garden is one of the best.

We find it to be the case that many people in the school section are often opposed to this sort of work and have to be converted. Many think that the children have enough agricultural work at home, and many more are much averse to anything new that may be introduced into the old school curriculum. However, in our section opposition was not thought of, as the teacher has the good-will and co-operation of the entire section.

It was very little work to get the pupils interested in the garden idea, as at the mere mention of the study of any outdoor life, they were always all attention. We decided on the northern corner of our school yard as the best place for our garden. The ground here was high, unshaded, and fertile. Besides it was here that many unsightly weeds as butter-and-egg plant, yarrow and milk-weed, grew and we thought these could best be eradicated from our grounds by the constant cultivation it was necessary to give our garden. Another reason was that in this place the garden would interfere least with the pupils' play ground.

By measurement we found that a plot sixty feet by twenty feet was as large as could reasonably be spared, and just here several lessons on scale drawing were introduced. Scale maps of the school yard were drawn showing the relation of the garden with respect to the school-house and the rest of the grounds. Then more definite plans of the garden were

made. The pupils helped in this and while the plan was being put on the board, the pupils were making one on paper.

Although the matter had received the approval of the trustees, no actual meeting was held until about the middle of April. Our plans and ideas were submitted to them, open for criticism or change. Definite arrangements were made for the hiring of a man to cultivate the ground and for the purchasing of a garden fence. The next morning the trustees met on the school grounds, measured and marked the space to be spaded, decided on how many rods of new fence were needed, also how many new posts. One suggested that as we were having a new fence around the garden the old one in front was shown to rather poor advantage, and needless to say it was soon replaced by a new one.

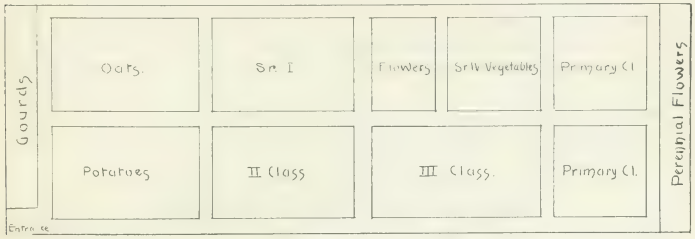
By Arbor Day everything was in readiness for the work of pupils and teacher, and it remained for us to continue the work with as much enthusiasm as it was begun. The afternoon of Arbor Day was spent in the garden, laying off the plots according to our plan. As yet we have no garden tools belonging to the school, but the pupils readily brought these from home. Previous to this the boys had prepared stakes or pickets, and with these, a garden reel, a tape measure, hoes and rakes, we were ready for work. After a hard afternoon's work our garden was neatly laid off into plots. The fertilising and levelling of the plots was left until planting-day.

The junior classes were interested in easily-grown vegetables and flowers, while the seniors were more interested in experiments. In order to keep the work interesting to them, and in order that pupils passing from one class to another would not be required to work a second time with the same plants, each class planted different vegetables and flowers. The class plots were divided into two parts, one for vegetables, the other for flowers, and each member of the class planted and cared for a certain part of each. Although each child had a feeling of special ownership and responsibility, the feeling of combined ownership was never lost and in speaking of the plot, it was always "our plot", or "our flowers".

The primary classes planted the easily-grown annuals as lettuce and radish; the intermediate classes, biennials, as beets, carrots and cabbage, while with the senior fourth the new vegetable, kohlrabi, was introduced. Besides this the fourth class tried in their plot an experiment with lettuce. The seed of this was obtained from the agricultural college at Guelph, and at certain intervals sodium nitrate was sprinkled round the roots. This lettuce, when grown, was compared with that grown in one of the junior plots, from seed obtained at a local grocery, and, much to our disappointment, did not prove as good for table use.

Besides the class plots we had two experimental plots. In one we planted Siberian oats and in the other six hills each of an early and late

potato (Early Eureka and Empire State). This seed was also obtained from Guelph. Our oat plot measured ten feet by eight feet. It was seeded May the sixth, germinated May the twelfth, and was harvested the last of August. About half of our plot was destroyed by a horse, but from the rest we obtained three pounds three ounces of splendid oats. These were compared with oats grown in the locality, and were found much superior in quality. From our potatoes we realised about ten pounds of the early Eureka and twelve of Empire State.



At either end of the garden we reserved a space three feet wide. At one end we planted some perennials as phlox and columbine, and on the other some watermelons, representing the gourd family; now these are tempting fruit, and of six watermelons we harvested only two of the smallest, enough, however, for a watermelon treat one Friday afternoon.

After our oat crop was harvested, the ground was again cultivated, fertilised with a good sprinkling of coarse salt, which was well mixed with the earth and prepared for an asparagus bed. The young plants will be distributed among the children to start permanent asparagus beds at their homes.

After each period of work in the garden, the classes were given some seatwork of different kinds relating to the work done. A garden manual was kept in which accounts of the progress of the garden were written by members of the different classes. During vacation the garden was placed directly under the supervision of the older pupils. Each pupil in the fourth class was given a plot to supervise, and accounts of the work done were kept by them. At certain periods the teacher visited the garden, generally while some were at work, and corrected any mistakes. In September our garden was in splendid condition, and we were ready for our regular school duties without having to spend extra time in it.

The garden has proven beneficial in a great many ways. The children, once deeply interested, were always finding the best ways and means for cultivating their plots, and learned many useful lessons in connection with the work done. It proved also a link between home life and school

life, as it gave the home people more interest in the school and its doings. Instead of being a detriment to other school subjects, it has proven in every way a help. It is a part of the Nature Study, and can be correlated with a great many other subjects, as composition, geography, spelling and many more. This fall we organised a "Decoration Club" in our school for the decorating of our school grounds. The pupils appointed their own officers, and these have complete charge of collection of fees and the ordering of bulbs or plants. With some of the fees, tulip bulbs were purchased from the agricultural College; the rest will be spent in other decorative plants.

Our garden was by no means complete, and although it may have been successful in a way, we had a great many drawbacks, made a great many mistakes, and find that in many ways it could be bettered. Already we are beginning to talk of our next year's garden, and hope to receive from it greater benefits than those obtained this past year.

Suggestions for the Classroom

Current Events.—Even in the lower grades it is not too soon for the children to begin to take an interest in current events.

Request the children who are not old enough to read the newspapers for themselves, to have their parents tell them something of interest that has been printed in the daily paper; and each morning before they have had time to forget, have a "current events" period, giving each child a chance to tell anything of importance he knows that has happened, barring out murders and suicides. The brighter pupils will readily take to the idea, while the others, unwilling to be outdone, will strive to keep pace.

It is a habit that will not easily be broken, and one which will be a lasting benefit to them, for when they are old enough to read intelligently for themselves they will have become thorough students of the newspapers, without a knowledge of which, in this age of progress and discovery, no education is complete.—S. C., Pennsylvania, in *Primary Plans*.

Hearing a School.—Did you ever hear a school? Step out of your room into the hall (if you are in a school that has more than one room) and listen to the school. Sometimes you will hear only the dragging of feet upon bare floors. Sometimes you will hear only the voices of teachers, pitched high, showing great nervous tension. Sometimes you will hear the shrill voice of irritability. Sometimes you will hear the groan of a lot of drones. More times you will hear the busy hum of a happy human workshop, and above it childish voices break into song. You open the door and thrill, because you know you are in the presence of a school.—Julia F. Walker in *Educator-Journal*.

A Lesson on Induced Currents

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PURPOSE—To tabulate a series of observations made by the students from which they may clearly comprehend and easily deduce:—

(1) the nature and method of production of induced currents,
(2) the laws of induced currents,
(3) Lenz's law.

Apparatus—Primary and secondary coils; a sensitive galvanometer; a suitable source of current; a magnetic needle; a key.

INTRODUCTORY

1. Connect in circuit the galvanometer, primary coil and battery. Determine the following facts with regard to (A) the galvanometer deflection

a—the direction (right or left),
b—the amount (number of graduation spaces of the scale),
c—the duration (whether momentary or continuous);
(B) the polarity of the face of the primary coil (end of coil without binding posts).
(C) the direction of the current in the face of the primary.
(for observations see table)

Remove the galvanometer from the primary circuit, and connect in circuit with the secondary coil, being careful to join the same binding post of the galvanometer to outer end of the secondary as was joined to the outer end of the primary. The primary circuit will consist of the primary coil, key and battery.

Q. How many electrical circuits are there? A. Two.

Q. What differences between them, as to (1) presence or absence of a current, (2) construction of the coils? A. The galvanometer circuit contains no source of current, and its coil consists of very many turns of fine insulated wire. The battery circuit, when closed, possesses a current, and its coil consists of a few layers of coarser insulated wire. (Introduce the names primary and secondary.)

Q. Why is the wire insulated? A. That the current may travel through the entire length of the copper coils, and not across contiguous layers (short circuit) as it would if there were no insulation.

Q. If the primary coil is inserted in the secondary coil, can the primary current enter the secondary circuit? A. No. Q. Why? A. The insulation makes it impossible.

Q. Can the lines of force of the primary coil's magnetic field penetrate or permeate the secondary coil? A. Yes.

Q. How is that possible? A. Lines of force are not prevented from escaping from the primary coil by either the insulation or the wood of the spool.

Nature and Method of Production of Induced Current

2. Close the primary circuit, and quickly insert the primary coil inside the secondary, noting the character of galvanometer deflections. Allow the coil to remain for a time and then withdraw it quickly, and note the deflections. (Tabulate the results.)

Q. How do you account for the galvanometer deflections? A. The presence of a current.

Q. When only were currents produced in the secondary circuit? A. 2a, 2c.

Q. What change occurs in the number of the lines of force enclosed by the secondary coil (1) in 2a, (2) in 2b, (3) in 2c? A. (1) an increase from none to field capacity, (2) no change, i.e. a constant number, (3) a decrease—from capacity to zero. The currents produced in the secondary circuit are named induced currents.

Q. What do you observe about their duration? A. They are momentary.

Q. What determines their production? A. A change in the number of the lines of force in the space enclosed by the secondary coil.

Q. How can we tell the direction of successive induced currents? A. By comparing their galvanometer deflections, as to direction.

Q. How would the direction of the induced current produced in 2a compare with that of the battery? (See table No. 1.) A. Opposite. (We call this an inverse or negative induced current.)

Q. How would the direction of the induced current in 2c compare with that of the battery? A. The same. (We call such a direct or positive induced current.)

Q. What then are induced currents? A. They are momentary currents produced in a closed circuit (secondary) whenever there occurs a change in the number of the lines of force passing across the circuit.

II. The Laws of Induced Currents

3. Obtain from the pupils observations for the following operations and tabulate them:—inserting and withdrawing the primary slowly and rapidly; making and breaking the primary circuit, etc., etc.

(for observations, see table below)

Q. State the number of the operations (table of observations) in which the induced current flows in the same direction as the battery or primary current. A. 2c; 3b; 3d.

Q. What name do we give to such a current? A. Direct.

Q. What change in the number of the lines of force occurs as we withdraw the primary coil or break its circuit? A. A decrease.

Q. How would the magnetic field of the secondary coil in these cases compare with the primary as to polarity? A. Similar. The operations of withdrawing the primary or breaking its circuit invariably produce a direct induced current. We therefore call the following statement a law:—Whenever a decrease in the number of lines of force which pass through a closed circuit takes place, a current is induced in this circuit, flowing in the same direction as that which would be required to produce this magnetic field, that is a direct current is produced.

(The other part of this law would be presented similarly.)

Q. What effect has the speed of withdrawal upon the galvanometer deflections? A. The amount of deflection increases with the speed.

Q. What is the explanation of the greater deflection? A. A stronger current.

Q. On what does the strength of an electric current depend? A. The resistance of the circuit, and the electromotive force.

Q. Does the resistance of the secondary circuit vary during the production of the induced current? A. No.

Q. Then the stronger current is due to what? A. A higher E.M.F.

Q. When only do we produce an induced current? A. Whenever we alter the number of the lines of force which pass through a closed circuit.

Q. How then can we increase the E.M.F. of an induced current? A. By increasing the variation of the flow of the magnetic lines of force through the secondary circuit.

This relation is known as the second law of induced currents.

Lenz's Law

Q. What is the polarity of the face of the primary? A. South.

Q. As you view the pole that would be clock or contra-clockwise? A. Former.

Q. At the time of withdrawing the primary circuit, what is the polarity of the face of the secondary, and the direction of the current at that face? A. South; clockwise.

Q. The primary and secondary currents at the same instant are flowing in the same or the opposite direction? A. In the same direction.

Q. Parallel currents in the same direction have what action on one another? A. They attract one another.

Q. Then as we withdraw the primary to produce the induced current, the attraction between them would oppose or accelerate the motion which induces the current? A. It opposes this motion.

(The other case—inserting the primary—would be presented similarly.) This relation is known as Lenz's law.

OBSERVATIONS

No. of Op.	Operation	Polarity (face)	Current direction	Galvanometer deflections		
				Amount	Direction	Duration
1	Battery current..... (primary circuit)	Primary South	Coil Clock-wise	scale capacity	Right	Continuous
2.a	Inserting p. coil.....	Secondary North	Coil Contra	2.5 scale divisions*	Left	Momentary
b	P. coil stationary.....	.....	.....	none	.....	.....
c	P. coil withdrawn.....	South	Clock	2.5 " "*	Right	Momentary
3.a	Inserting p.c. rapidly...	North	Contra	3.5 " "*	Left	"
b	Withdrawing "	South	Clock	3.5 " "*	Right	"
c	Making primary circuit	North	Contra	4.5 " "*	Left	"
d	Breaking primary circuit.....	South	Clock	4.5 " "*	Right	"

* These values are only approximate.

In conclusion, I wish to say that throughout the lesson I would drill each new point. In actual class work, I would break up some of the longer questions into several shorter ones. At the close of the practical work, a thorough drill would follow.

Hints for the Library

Effective Methods in Mechanical Drawing, by Frederick H. Evans. This book is a reprint of sections of "The Drafting Room Series", a larger work by the same author, which was reviewed in a recent number of this magazine. The first section, on the geometry of drafting, presents and very precisely illustrates the steps leading up to a completed drawing. It also very fully illustrates methods of drawing circles tangent to lines and to other circles, and the application of these methods in the working out of real shop problems. Another very valuable section is devoted to kinks and short cuts, and offers some excellent helps on the drawing of irregular curves and the planning and use of templets. Cloth, 44 pages. 50 cents. Manual Arts Press. A. N. S.

Heredity and Education*

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THERE is a great controversy raging in the ranks of educators and other social workers as to the relative strengths of heredity and environment. The conclusions which a nation reaches upon this problem consciously or unconsciously affect the whole of its educational organisation and procedure. At the present time the workers upon the problem are ranged in two hostile camps. On the one hand, we have such men as Galton, Pearson, Thorndike, and Woods, who declare that heredity is all important, and that environment counts for little in the final make-up of an individual, while on the other, we have Hayward, De Candolle, Constable, and Ward, who assert exactly the opposite. And the difficulty of the situation is not rendered easier by the fact that the protagonists on both sides take the same piece of evidence and use it in support of their own particular views. We may, however, assume, in such a case as this, that neither party has the whole of right and wisdom on its side. I want to reconcile, if possible, the differences between the believers in environment and the believers in heredity. I shall maintain that both are partly right and partly wrong. The truth lies somewhere between them. Heredity and environment are not opposing forces; they are strict correlatives. One without the other is impotent. Of what use are hereditary potentialities of growth if there is no environmental nutrition to develop them? Of what use is the special environment of a good school if nature denied intellectual potentialities to the pupils?

It will be useful at this point to define our terms. By heredity is meant the complete potentialities of an organism at the moment of impregnation. Environment is the sum total of the stimuli which tend to develop (or to destroy) the potentialities of heredity. Both terms have been misused. Heredity to some is a force which moulds the offspring in the likeness of the parent. To others, it expresses the degree of likeness between progenitors and descendants, and is, therefore, the opposite of variation. Others there are who assume that heredity is equivalent to the complete congenital equipment of the individual, thereby forgetting the influence of pre-natal environment. The definition of environment is usually too narrow. Few of the definitions include all the three environmental forces—nutrition, use, and injury.

*Extracts from Inaugural Lecture, October 3rd, 1913.

Education in its widest sense is synonymous with environment, but perhaps the term is best restricted to schooling—the creation of a specialised environment for the development of the innate powers and capacities of the pupil. A great percentage of our educational stimuli goes astray, but by literally bombarding the pupil with a concentrated fire of stimuli, we usually develop those powers which the adult portion of the race considers valuable and essential before the pupil leaves school or college. But we must ever remember that teaching implies learning; the teacher fails to teach if the pupil fails to learn. The distinction between education and environment will be appreciated from the following illustration. The normal and diffuse environment of the street would have to be active many years before it developed in a boy the power to read or do multiplication. The special concentrated environment of the school develops these innate powers within a comparatively short space of time.

Turning now to an enquiry into the problem of heredity, we discover the first great law, namely, that like tends to beget like. That is, the endowment of the parents tends to be reproduced in the offspring. The general truth of the statemtnt is seen when any family trees are examined. In some cases, as in the inheritance of such traits as eye colour, deafmutism, and certain other defects, the only environmental factor at work is nutrition; everything else is due to heredity.

A still closer examination into the results of heredity shows that the resemblances between parents and offspring are far from perfect. Tall lean parents may have a short fat child; black-haired parents a red-haired child; and brilliant parents a stupid child. These differences in the offspring are known as variations.

The measurement of variations shows that they obey two laws: (1) the law of distribution in a form resembling that of mere chance; (2) the law of regression towards the normal of the species or race.

Heredity is most potent in the physical nature, less potent in the mental, less potent still in the moral. But we must not forget that all careful measurements of inheritance show that like tends to beget like not only with respect to physical characteristics but also in the mental (compare mental defect) and to some extent in the moral.

Heredity is very highly specialised. We may look upon an individual as a bundle of mental, moral, and physical traits. And no two bundles are alike, not even in those cases of extraordinary likeness found in twins. Some children are born to be tall, others to be short; some to be intellectual, others to be stupid, in spite of all the efforts of educators. Heredity not only determines what traits a man shall possess, but also limits their possible development. It is evident to all that no matter what nutrition is given, a child cannot be made to grow to 20 feet in

height: the possibility of a similar situation in the realm of mental and moral qualities is seldom realised.

What then is the function of environment? Environment, it seems to me, determines which of the hereditary traits or potentialities shall be developed and to what extent (within the limits fixed by heredity). It can also destroy the traits and capacities after their development. But it can never create. The powers must be innately present before they can be developed.

What changes in our educational organisation and procedure will result from a more general and wider knowledge of heredity among educators? The following seem to me to be the more important.

In the first place we shall insist anew on the preservation of the individuality of each scholar. Modern methods have tended to deal with scholars in groups. We have tacitly, if not openly, assumed that all were born equal and that all could be educated by the same methods and up to the same standards. How else can we explain the fact that practically all children are put through the same "educational mill"; that teachers demand of each and every member of the class four sums right, a dictation or a composition without a single spelling mistake, and writing equal to a copper-plate standard; that written examinations as tests of knowledge are universal? Do not misjudge me! Examinations as tests of a minimum of knowledge that all scholars must achieve are valuable; if used, however, as ultimate goals of knowledge, they are cramping and degrading. The emphasis that Dr. Montessori places upon the individual instruction of scholars comes at an opportune time. Much of her teaching is reactionary; her insistence, however, on the necessity for the separate training of each of the sensory powers of the individual marks a new era in educational method.

The second great change, and to some extent, it is a corollary of the first, will be a change in educational administration that will permit, first, a greater differentiation in schools, and second, a considerable reduction in the size of classes. Our educational system has been devised for the scholar, the man of leisure, and the thinker, while little attention has been paid to the "doer", the manual worker, and the producer in general. Classes are often so large that the teacher has to maintain a military discipline under which little training of personality can be achieved.

Thirdly, we shall tend more and more to make education more democratic. None of us can tell where genius or great moral worth may be hidden. An opportunity for development must be given to all, rich and poor, native and foreign. On the other hand, when incompetency to profit by instruction has been clearly shown, we must not hesitate to remove a pupil from an educational institution. Education costs money

and we cannot afford to waste the tax-payer's substance on vain efforts to educate the uneducable. Especially must we be strict upon university students. Deliberate shirking or patent incapacity must be penalised by expulsion.

Fourthly, we shall learn to view the failures of the teacher in a fairer light. Only too often has the teacher been censured for what are really the shortcomings of Nature. It is not every boy and girl in High School who can reach the standard of Junior Matriculation by the age of sixteen.

Lastly, we shall take a saner view of the great eugenic problem. As teachers we must try to teach all the children who are sent to us irrespective of their ability. Heredity, however, shows us that mental defectives are born of mental defectives with fatalistic certainty. Therefore, as citizens, we shall do our utmost to awaken a civic conscience, which insists on the limitation of the output of the defective type. We want no lethal chamber, but we do want homes where these unfortunates, while passing a calm and happy life, will be prevented from adding defective offspring to the already heavy burdens of normal society.

Hints for the Library

Introduction to the Science of Education, by Benoy Kumar, Sarkar. 141 pages. London: Longmans. 1913. (Canadian Agent, Renouf Publishing Company, Montreal.) $1.00.

This book, translated from Bengali by Major Basu, is the work of a brilliant Hindu professor. Although only twenty-six years of age, he has written three volumes of "Essays"—historical, educational and miscellaneous: "Lessons on Sanscrit without Grammar"; "The Science of History and the Hope of Mankind"; "Sukraniti (Sukracharya's System of Morals, Social, Economic and Political)"; "The Pedagogy of the Hindus"; and seven volumes entitled "Aids to General Culture Series". He writes both in English and Bengali, and lives in the hope that western educators will eventually turn to India for fresh philosophies and ideals.

His pedagogy is sound and marvellously up-to-date. He is actually teaching and practising in Bengal methods which we occidentals are still looking askance at because of their conflict with old-established usages and ideals. The eastern metaphors he uses give charm and piquancy to his writings, which we have greatly enjoyed, and from which, we hope we have profited somewhat. P. S.

Grammar as a Mental Discipline in the Public School

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THERE are various reasons put forward for including grammar in the Public School course and at least one of them can be subjected to the methods of experimental education to test the validity of its claim. This reason is that it is "an excellent mental discip ine".

Sometimes it is said to be the only logical training possible in Public School education. The other reasons are outside this present article, but can be enumerated for the sake of completeness. They are:—

1. "It is a necessary preparation for study in foreign languages." Indeed teachers of classics and modern languages often complain that they have to spend much valuable time in teaching English grammar, which should have been learnt previously in the Elementary Schools.

2. "It improves the spoken English of the pupils and is indispensable for written composition and good literary style." This is an extremely debateable claim as probably imitation is a more potent factor in learning correct spoken or written English.

3. "It is a great help in the proper appreciation of English Literature."

These last three reasons are urged from the functional point of view. The first reason is purely formal in its aspect. Therefore formal grammar should be distinguished carefully from functional grammar.

When once a subject has been introduced into a school course of study, there is a tendency to forget that it was introduced because of its real or alleged usefulness. It soon begins to be studied for itself alone. It becomes a science by itself and is isolated as a separate subject. This is a very real danger in all subjects. For instance, teachers require to understand the mind and its working in order to understand their pupils and their own methods of teaching Therefore psychology was introduced into Normal Schools. But it might very easily degenerate into a more metaphysical subject or be pursued from the physiological or experimental standpoint which is indeed far removed from the immediate needs of the teacher in whose work of teaching only the practical aspects are valuable.

After analysing all the claims of educational theorists the following conclusions were drawn by Dr. T. H. Briggs (see "Teachers' College Record", Sept., 1913):—

FORMAL GRAMMAR TRAINS CHILDREN

A—With rules or definitions
1. to see likenesses and differences.
2. to test a definition critically.
3. to apply a definition thoroughly.
4. to make a rule or definition.

B—With reasoning
5. to test reasons.
6. (*a*) to take from a mass of data all that are necessary and to use them in reaching a judgment.
6. (*b*) to demand all necessary data before drawing a conclusion.
7. to reason in other fields ,*e.g.* arithmetic.
8. to reason syllogistically.
9. to detect catches.

These are the dogmatic assertions of theorists and sometimes even of practical teachers. But "opinion" is an unsafe guide. Such opinion may be based on the fallacy that improvement in the child's intellectual powers is due to formal grammar, whereas it may indeed be due to advancing years, or to the influence of other subjects. Who can tell? Another fallacy is based on the results with secondary school pupils. However, these are not necessarily intellectually bright because of such formal studies, but rather they go on to the secondary school, where such studies are taught precisely because they are intellectually bright.

No proof based on facts has been offered for these assertions, though suspicion naturally falls on such unsupported opinions, because experimental psychology has discarded the doctrine of the universal transfer of training. The doctrine of formal discipline ought to be as obsolete as the old-fashioned "Faculty Psychology".

Dr. Briggs, however, devised some tests and used others devised by various experimenters, in order to investigate this subject scientifically.

There were 54 ingenious tests divided into 12 groups, each group containing several exercises to test one of the claims. For instance, Group I. contained 10 tests or sets of exercises to test the ability to see likenesses and differences. Group II. contained 4 sets of excercises to test the ability to judge a definition and to amend it when faulty, and so on with the other groups. This experiment was carried on for six months in the Speyer School and in the Horace Mann School, New York, in 5 Illinois Schools and in an Illinois and an Indiana Normal School. Proper precautions were taken to eliminate the possible errors, and the children in one room got preliminary practice in formal grammar while the other did not. The results of individual tests are very interesting. For instance, the result in Group I. was:

Room I. in the preliminary test showed a superiority over Room II. in seeing likenesses. After three months of formal grammar Room I. showed only about a third as much gain in this ability as Room II. without formal grammar, showed. Room II., on the other hand, after its three months of formal grammar, showed only about an eighth as much gain as Room I., after three months without formal grammar, showed. When each room is compared with itself Room I. gained with formal grammar only about a third of what is gained without; while Room II. only about an eighth as much.

In another test the gain of Room II. with formal grammar is only three fourths that of Room I. without it.

Generally speaking the results were:

1. An overwhelming proof that better improvement was oftener made *without* formal grammar than with it.

2. Sometimes some improvement with formal grammar; sometimes some improvement without it.

In such a case the evidence is against a positive transfer.

3 Improvement with formal grammar and falling off without it. These were extremely few cases. In view of all the facts there is distinct evidence against positive transfer. Even if the results are neutral, the claims for formal grammar are not substantiated. In conclusion Dr. Briggs remarks moderately "As a result of this experiment it may safely be asserted that these particular children after the amount of formal grammar they had, do not, as measured by the means employed, show in any of the abilities tested improvement that may be attributed to their training in formal grammar."

Some of his tests may have been too difficult, a few undoubtedly were. For instance (page 16, no. 6) "If this argument is unsound, briefly tell why."

"All bricks are made of clay. This vase is made of clay. Therefore this vase is a brick." Young pupils may see the absurdity but will find great difficulty in explaining it.

But the experiments could be tried again by other investigators and corroborated, or disproved. In any case the necessity of proof now lies with the advocates of the disciplinary value of grammar.

SAMMY'S ARITHMETIC.—Sammy was not prone to overexertion in the classroom; therefore his mother was both surprised and delighted when he came home one noon with the announcement: "I got one hundred this morning."

"That's lovely, Sammy!" exclaimed his proud mother, and she kissed him tenderly. "What was it in?"

"Fifty in reading and fifty in 'rithmetic."

Geographical Experiments

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THE following experiments may be done by the pupils working in pairs:—

1. Make a rectangular tube about 3″ x 4″ and 8″ long by nailing four pieces of board together—a chalk box with ends removed will answer. Lay a sheet of paper on the floor in the sunlight at noon, and, holding the tube with its long edges parallel to the sun's rays, outline with a pencil the rectangle of lighted paper within the shadow of the tube. This area represents the surface heated by the rays that pass through the tube. Preserve the drawing, recording date. Perform this experiment weekly for six or eight months (September 21st to June 1st will be a convenient period). Cut out the areas obtained and arrange in order. They will be found to increase in length from June 21st to December 21st and to decrease during the other half of the year. Since the heat passing through the tube is in all cases the same, its intensity will vary inversely with the area over which it is distributed.

2. Concurrently with the preceding experiments measure the altitude of the sun, thus:—Fasten a lath to a square post, or other support, and point it at the sun at noon; then, with a protractor find the angle between the lath and the horizontal (found with a spirit level). This angle should be recorded on the rectangular paper obtained by experiment 1 on the same day.

The changing angles together with the varying areas furnish data that should throw some light on the difficult subject of the seasons. Besides the information, the pupils will have gained practice in patient, continuous observation, and, for them, accurate measurement.

The altitude of the sun on or about the 21st of September, December, March and June is especially interesting as it furnishes a means of reckoning the latitude of the place.

Both experiments should be performed at *solar* noon. To find this, get the longitude of the place from the map and for every degree west of the 75th meridian, west longitude, add 4 minutes to clock time (Eastern standard in the case of Old Ontario and Quebec), deducting the same if the place is east of the 75th line. For example, if the longitude be 81° W., solar noon falls at 12.24 by the clock.

Little Journeys to Rural Schools

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VIII.

IT was a stormy day in winter when I called upon Miss Price in the Milton school. The few pupils present were certainly having a "good time" in the very best sense of that term.

They were playing a game called "ring-toss". Quite likely every reader of THE SCHOOL has played this game. It consists of four or five rope rings about 8 inches in diameter. A stake, six inches high, is held in position by boring a hole in a piece of plank about a foot square. The pupils, when throwing the rings, stand at a distance of eight feet from the stake. The first ring that is made to circle the stake counts *one* point, the second, *two*, the third, *three*, etc. That is, if a pupil throws four rings over the stake, his total score is the sum of 1, 2, 3, and 4.

The teacher placed the score on the board in the following manner:

	Mary	Frank	David	Tom	Clara	Miss Price
	1	1	1	1	1	1
	2		2	2		2
	3		3			
			4			
	—	—	—	—	—	—
Total:—	6	1	10	3	1	3

Each player then took another turn, and the game was continued until the first player made 30 points.

"How often do you play this game?" I asked the teacher.

"Every stormy day, when the children cannot play outside; also every Friday afternoon when the conduct for the week has been *satisfactory*. Sometimes one or two pupils lose the privilege on account of conduct."

I have been in schools at noon and recess when the pupils were exceedingly noisy. The teachers found it difficult to suppress this noise, which was certainly most taxing on the nerves. How easy to introduce games which will eliminate this trouble, benefit the pupils and make school life more attractive!

It is often this attention to "little things" that marks the distinction between success and failure in any walk in life. The successful person looks into the future, foresees undesirable situations, and is ready to meet them when they arise. A teacher's work is fraught with these situations which demand prompt action. Such prompt action is likely to be more effective when the situation is anticipated and the action carefully planned.

The children added their own score. Would it not be possible to introduce into the school work a sufficient variety of interesting activity to involve all the exercise in arithmetic that would ever be of practical use to the child in any common sphere of life? The playing of games, the measuring of garden plots, the buying of the family groceries, the use of the calendar, clock, etc., would give any child a sufficient grasp of the application of numbers to make it possible for him to adjust himself to any ordinary new application that might arise. Teachers have too long worshipped at the shrine of arithmetic and spelling. There are times when a sane person would infer that it was "all of life" to "figure" and spell! When we look at the matter with an unbiased mind, we are astonished to observe of how little concern these subjects really are in the actual life of any individual.

It is far more important to know how to play and enjoy work and to grow in physical and mental strength. This will come only by the introduction into our schools of more interesting activity and more opportunity for each individual to give expression to his own inherent faculty. I am positive that the ball games I played as a boy at school did me far more good than 90 per cent. of the school routine. I am sometimes disposed to believe that learning to read (taught in the most crude manner) was the only really valuable exercise that the school afforded.

After the game, Miss Price called upon the pupils to read short compositions entitled "The Most Interesting News in the Papers of this Week". The pupil gave the name of the paper, the page and column in

which the news was found, and a short summary of the published item. This was a weekly exercise. The teacher preserved the best of these compositions, and at the end of the term one of the trustees gave a prize for the best selection. The pupils cut out the items at home and wrote the compositions in school. The teacher was thus better able to judge the amount of skill which was displayed in making the summary. The children thus learned to read for the thought and at the same time learned to express the thought in their own words. Contrast this exercise with reading in rotation from a "Class Reader"! Really, teachers, does not the thought of the latter performance sometimes make you shudder? And yet this farce is still carried on in places where people seem, in other respects, fairly enlightened! Small wonder that the world is so filled with mediocrity. Our only educational salvation rests upon the few who break away from the traditions of school and college and carve out a path for themselves. However, we'll live in anticipation of better days to come.

Book Reviews

Moral Instruction, its Theory and Practice, by F. J. Gould. London: Longmans. 1913. Pp. xii, 196. (Canadian Agent, Renouf Publishing Company, Montreal.) 2s. 6d.

This is the most comprehensive account of aims and methods that the founder of the Moral Education League has yet given us. It is a good exposition of what we consider to be an essentially bad method of teaching morals. To bring the moral of a story into the focus of consciousness, as the author does, destroys most effectually its efficacy. It either arouses counter-suggestion or, at its best, tends to produce prigs. Let the story teach its own moral. This the author is not content to do.

P. S.

Design and Construction in Wood, by William Noyes. Manual Arts Press. This is the third volume by Mr. Noyes on manual training, and is a worthy successor to the others. The distinguishing characteristic of the book is that the projects are all treated from the artistic viewpoint. It is seldom that the work of the artist and that of the craftsman are so well combined as in the present volume. While every chapter is written from the standpoint of the artist-craftsman, there are two chapters that are alone worth the price of the book, one on "Wood as a Medium of Artistic Expression", and the other on "The Framing of Pictures". The illustrations are quite in keeping with the artistic aim of the book, and the printing and binding are all that could be desired. Pp. 160. Price $1.50.

A. N. S.

Schoolroom Decoration

ADA WHITTON TILLINGHAST

I SHALL digress from the real import of my theme to speak of processes of making pictures, which have important relations to school decoration yet are not in themselves decoration.

In a recent number of THE SCHOOL, the position was taken by one of the contributors that carbon photographs and color fac-similes are the only worthy processes for schoolroom pictures and that carbons are the only fadeless photographs. I have been something of a collector of pictures in various processes (albumens, bromides and carbons) for a great many years, and have had unhurried opportunity to note their wearing qualities. A bromide print of a cloister in Rome has hung at a western window for many years. It is an unmounted print between two pieces of glass with a narrow frame. It has served as a transparency of a much-loved subject (I recommend this inexpensive form of enjoyment to my readers) and although exposed to the sunshine of long summer afternoons it has not changed color. "It is as good as new." I have some platinum prints guaranteed fadeless, but the subjects, Blashfield's 'Angel with the Flaming Sword" and Watt's "Happy Warrior", have become wan and yellow shadows in a comparatively short time. Bromide enlargements about 12 years old are in statu quo. I have prints from Germany, France, England and America in good colours and fadeless as carbons, I think. During four years "The Sunset" by Henri Rivière has hung near a south window where the sun has shone on it for about six hours each pleasant day. Its colour has not changed in the least. After a long and varied experience may I say that the world of picture-making is very large and processes constantly improving? Schoolrooms most expensively decorated are not always most fruitful in broadening the outlook and feeding the love of beauty in those for whom schoolroom decoration is meant—the children.

And now let us consider the arrangement of an imaginary schoolroom. It is a south-east room, and needs gray-green walls with lighter tint for the ceiling. (All rooms irrespective of source of light should have green w ndow shades for eye protection and consequent lessening of nervous strain). If there are pictures and casts, we shall have the courage of our convictions and eliminate the meaningless and unsuitable ones. We shall hang small pictures low enough to be seen, even if we must provide plain dark green, brown burlap, or similar material for a background instead of the black board.

We must consider sizes of pictures in relation to spaces, and if we have pictures in colour and monotone we shall not hang them side by side, but on opposite sides of our room. Suppose we have the joy of beginning the decoration; let us have a motive in our collection—childhood, perhaps, or nature, or views of some historic city with some pictures from its galleries—or, if we must have miscellaneous subjects, let us avoid clashes. I once listened to a speaker who was trying to help teachers to decorate schoolrooms appropriately. During the course of her lecture she rem nded her audience that a portrait of Abraham Lincoln, for example, should not be hung beside the Sistine Madonna. Next day the morning newspaper went into a grave and scathing arraignment of the lecturer on the ground of disrespect and lack of patriotism.

Every teacher can make a delightful picture of a schoolroom by studying its limitations and advantages. The more of the former to overcome, the greater the artistic triumph. It goes without saying that crêpe paper ornaments should not be in evidence except on gala days. No gaudy calendars are admissible, and nothing except permanent decorations should be above the blackboard line. Plants in pots or window boxes play an important part in the scheme.

In fine—quiet colours, horizontal lines emphasised rather than vertical ones, good spacing, few decorations rather than many, will give an air of refinement and exert a silent influence to reappear in the lives of the pupils.

Book Review

Paper and Cardboard Construction, by Buxton and Curran. Manual Arts Press. This is a new and very pleasing edition of a former work by these authors. The viewpoint is somewhat unusual for a work on paper and cardboard construction in that the projects illustrated are all such as belong to the uses of paper and cardboard in the industries. This has a double advantage: it gives the pupil a knowledge of the real uses of these materials as well as giving him skill in working with them and power to plan his work satisfactorily. Like all the recent works by the Manual Arts Press, it is beautifully illustrated and the printing and binding are excellent.

Besides giving many projects for the first four grades of the Public Schools under the divisions of "Book Problems", "Box Problems", "Card Problems", and "Envelope Problems", the book contains excellent chapters on "Planning of Courses", "Equipment and Supplies", and "Hints for Teachers and Supervisors". It is a thoroughly up-to-date work in this subject, which is continually developing. Pp. 190. Price $1.50. A. N. S.

The Teacher in Society

IN a recent number of THE SCHOOL the question was asked, "Is the Schoolmaster not a citizen? If he is competent to train the citizen of the future, is he not, with his trained intelligence equally competent to take his place as a Canadian citizen?"

The question I am going to ask is, "Is not the average female teacher competent to take her place in society? If she is sufficiently cultured to train the future society woman, is she not equally competent to move in the society of any city or town? If she is not, then I would ask her to resign her place as a teacher and take up some work more suited to her tastes.

That there are different degrees of culture in the teaching profession, as well as in other lines of work, is admitted. Some teachers enter the profession with an inherited amount of culture which would take others years to acquire. The teacher who has had the advantage of wide reading and much thought and travel has an untold advantage over one who has to make her own foundation. But culture is in reality a matter of "soul". *Canadian* society should recognise its cultured element.

As a rule, the work of the teacher is strenuous, and she (if she has done her work faithfully) is scarcely in a condition physically to spend much time in entertaining after school hours. However, she can, and does, enjoy an occasional entertainment. This is not a selfish, one-sided view, on her part. All financial equivalent aside, her life cannot help but be one of sacrifice. She denies herself many pleasures, that she may present herself fresh and whole-hearted at her task each day.

If she is a "teacher", not a "hearer of lessons", she puts an inestimable amount of herself into her pupils every day.

Parents recognise the fact— at least many do to-day—and many parents out of at least a sense of duty, frequently invite "the teacher" to take tea with John or Mary. She is introduced as "Mary's Teacher," etc., and in many cases is expected to entertain the company with a series of clever sayings, or doings of the same John or Mary. "Teacher", certainly appreciates the kindness of these parents, and she can easily recognise the *genuine sympathy* and *helpfulness* in some homes, but she returns to her home weary in body and mind.

There has been no mental or spiritual food given her. She has simply kept on *pouring out herself*—receiving nothing in return. Her soul rebels. She longs for the days of yore, when she was received into society as a

woman and not as a teacher—the golden days when she met in her father's home the highest society and scholarship.

Even in an unguarded moment she wishes she had never allowed her love for imparting knowledge to lure her into a place where she would be "only a teacher".

Fortunately, such attacks of melancholy are infrequent and she is enabled to live above the "patronage" of the so-called society lady, who unfortunately is unfamiliar with the Anglo-Saxon grammar, but who is, in the eyes of the world, eligible to society because of her *money value.*

"The most unkindest cut of all" comes from those who recognise the teacher's scholarship and value in the educational world, but forget that she is partly "human" and not altogether an *intellectual* icicle.

There are times when the conscientious teacher feels that she can really understand how Christ felt when He said, "Ye seek me *not* because ye saw the miracles, but because ye did eat of the *loaves* and were *filled*".

E. M. H.

Suggestions for the Classroom

Schools have to change courses of study from force of changing circumstances, for when people travel, geography becomes necessary; when immigration flows, history is imperative; when the age of machinery appears, engineering must be added; when science reveals the secrets of nature, geology must be added. This means not only change but advance. The future of education is destined to be not only more diversified than in the past, but also greater—greater scope, perspective and presentation.—*The Canadian Statesman.*

Securing the Control of Your School.—Most teachers who fail are weak in government. Without good government one cannot teach or even get the children interested enough in a subject to make them attentive. How can we secure good government? Shall we have a long list of rules, and compel the pupils to obey them or suffer punishment? Shall we nag and scold all the time? Most assuredly not; none of these will secure good government. We must first secure the good will of the children. This is not obtained by indulging them or by calling them by pet names, *but by making their work interesting.* No child likes to be treated like a baby all the time. Treat the pupils like young men and young women and they will reciprocate by "being quiet" and tending strictly to their own work. Treat them as you want them to treat you. If they get restless, open all the windows wide, have them stand and take three or four good deep breaths, then go through some simple gymnastic exercise, as the arm movements for example, to get the blood to circulating more freely.—M. F. Webb in *Normal Instructor.*

The Round Table

[This department, which appears from time to time, is intended to afford our readers an opportunity, without the formality of regular contributions, of asking questions, stating difficulties, furnishing information or expressing opinions in regard to matters relating to school work.]

A county inspector in the neighborhood of Spokane, Washington, announces flattering results from the practice of giving school credits for chores and household work done at home. It is said to result in better interest in all kinds of school work, the doing away with tardiness and the better performance of the chores and household work themselves.

It is quite probable that these results are secured. There may be a possibility that the influence of the school may not persist effectively at such long range after the novelty has worn off a little. On the other hand, it may be the establishment of a nexus between the school and the home that may continue to work out well and may be the beginning of a wider set of relations promoting efficiency by a larger harmonization of home and school interests.

Among conservative schoolmasters of the ultra-academic sort the practice may provoke a smile. The idea may be looked upon as a fad or as a mechanical device with no permanent or fundamental aspect in relation to educational endeavor. Doubtless some will say it is another of the little things that our enthusiastic and optimistic neighbors regard as the whole thing for a time to be followed by some equally big other thing soon.

It, however, has rather large significance and is fundamentally sound. By reason of the smallness of country schools and their mixed character it has not been found possible generally to establish courses other than those relating to the instrumental studies, such as reading, writing, calculation, etc. In this respect they are in sharp contrast to modern city schools where the industrial balance is more or less successfully exemplified. On the other hand again, the diversified experience of the farm boy in a good type of co-operative work on the farm is recognised as of great educational value judged by the success that farm boys are usually credited with attaining in the best type of life activity in business, the professions, etc. It is quite plain that if even a loose co-ordination of this kind of home training with school training can be secured the developmental experiences of the pupil will be unified. Likewise the recognised elements constituting the institution of the school, i.e. the parents, trustees, pupils, teachers and superintendents will have found a method of combining their efforts to secure results and these results will be more socially representative results.

[Extract from a letter received from J. A. McCaig, M.A., LL.B., Edmonton, Alta.]

[Extract from a letter re International Correspondence Scheme received from F. H. Spinney, 160 Sanguinet Street, Montreal, Que.]

If teachers who are interested in this valuable exercise, will send me the *best letter* by a *boy* and the *best letter* by a *girl* in each grade, I shall be pleased to select the VERY BEST from all that I receive, and send them for publication in THE SCHOOL. Be sure to send only *two* letters from each grade.

The advantage of this plan would be a great incentive for interest in the writing of the letters; it would also furnish ideals for each grade in the matter of good letters, and it would be suggestive of topics that may be utilised in this splendid school exercise.

F. H. SPINNEY.

THE RESURRECTION OF LIFE

H. E. COLLINS, B.A.
Collegiate Institute, Hamilton

When I see the lilacs blooming in the merry month of spring,
When I scent the locust perfume, and I hear the bluebirds sing;
When I see the bright-eyed daisies sprinkled o'er the meadow-vale,
And the showers of snow-white blossoms sifting through the evening gale;
When I see the golden jonquils to each other nod and nod,
And the dainty purple violets nestling in the emerald sod,
To my heart is borne this fancy, old as time, yet ever new,
Life is once more resurrected, and it LIVES for me and you.

HIS REASON.—Going to the blackboard the teacher wrote this sentence: "The horse and the cow was in the stable."

"Now, children," she said, "there is something wrong with that sentence. Who can correct it and tell why it is wrong?"

One small boy waved his hand excitedly and the teacher called upon him.

"It's wrong," he said with importance. "It ought to be 'The cow and the horse was in the stable,' because ladies always ought to go first."

Teacher—Who can tell me of two famous men who were boys together?

Johnny Smart Boy—I can. The Siamese twins.—*Woman's Home Companion.*

Library Hints for Modern Language Teachers

[For suggested books on Pronunciation and Phonetics and for list of Wall Pictures and Charts see March issue.]

Dictionaries

French.

Gasc: Library Dictionary. French-English and English-French. 975 pages. 8vo, half-buckram, 12s. 8d. G. Bell & Sons, Kingsway, London. Costs in Canada about $3.50. This is the best for the general purposes of teacher and pupil.

Augé: Petit Larousse Illustré; Nouveau Dictionnaire Encyclopédique. Librairie Larousse, Paris. Bound in red leather. An invaluable work to both teacher and student. May be had for $1.75. A dictionary and encyclopædia in French.

Bellows: French-English and English-French Dictionary. (New edition.) Henry Holt and Co., New York. $1.50. An excellent, up-to-date book.

International French-English and English-French Pronouncing Dictionary. Hinds, Noble and Eldredge, New York. $1.75. The pronunciation of both French and English is given in phonetic type.

Dictionnaire Phonétique de la Langue Française par Michaelis et Passy. Ch. Meyer, Berlin. 5 francs. About $1.50 in Canada.

Littré & Beaujean: Dictionnaire de la Langue Française. 8vo, 1420 pp. Published in Paris. Costs in Canada about $4.50.

Hatzfeld & Darmesteter, Dictionnaire Général de la Langue Française' Paris and Leipzig. 2 vols. 8vo. 2400 pp., about $10.

German.

Heath's German-English and English-German Dictionary, by Karl Breul, University of Cambridge. New edition. $1.50. Heath and Co., Boston. A working dictionary for students.

Muret-Sander's German-English and English-German Dictionary, 2 volumes bound in cloth. Very complete. Langenscheidtsche Verlagsbuchhandlung, Berlin. Costs in Canada about $8.

Heyne: Deutsches Wörterbuch. 3 volumes. Published in Leipzig. Costs about $10. A complete dictionary of German in German. Valuable to the teacher.

Oral Work and Conversation

French.

Walter: French Lessons, Charles Scribners' Sons, New York, 1912. 50c. A series of lessons by the Direct Method given to a class at the Teachers' College, Columbia University, New York, reported verbatim by Miss Ballard. Very suggestive and helpful.

Thouaille: First Steps in Colloquial French, Blackie and Son, London and Glasgow. 2s. School and home life described and discussed in the language of every day.

Smith: A First Year's French Book on the Oral Method; Blackie and Sons, London and Glasgow, 1s. 6d.

Mackay and Curtis: First French Book, G. Bell and Sons, Kingsway, London. 1s. net.

Two excellent beginners' books.

German.

Walter: German Lessons, Charles Scribners' Sons, New York, 1912. 50c. A companion book to the French one mentioned above.

Spanhoofd: Elementarbuch der deutschen Sprache, Heath and Co., Boston. $1. One of several books by a gifted teacher.

Savory: Das erste Jahr des deutschen Unterrichts, Oxford University Press, London and Toronto. 60c. A first book on the Reform Method; suggestive and clever.

Rippman: Dent's New First German Book, J. M. Dent and Sons, London and Toronto. 65c.

SUPPLEMENTARY TEXTS FOR FORMS I, II, III

French:

Guerber: Contes et Légendes, Part I, American Book Company (The Macmillan Co., Toronto). 60c. A series of charming stories, told in simple language. The best for beginners, in our estimation.

Short French Readers, 48 pages bound in cloth. J. M. Dent and Sons, London and Toronto. 10c. each. A good little series.

Perrault: Contes du Temps Passé, volume 1.
Laboulaye: Yvon et Finette.
Bascan: Légendes Normandes.
Laboulaye: Poucinet.
Erckmann-Chatrian: Histoire d'un Conscrit.
" " Le Trésor du vieux Seigneur.
Hugo: Le Bienvenu. (From Les Miserables.)
Balzac: Un Épisode sous le Terreur.

Shorter French Texts, 64 pages bound in cloth. George G. Harrap & Co., Kingsway, London. 6d. each.

Auzas: La Journée d'un petit Lycéen.
Macé: Contes du Petit-Château.
Sébillot: Choix de Contes Populaires de la Haute Bretagne.
Weisgerber: Cinquante Petites Lettres en Français.
Féval: Le Docteur Bousseau.
Moreau: Contes à ma Sœur.

[Further suggestions will appear in the May number]. W. C. F.

Book Suggestions for the Teacher of Art

Picture Study Reference Books.

The following books are recommended for the school library because of their helpfulness in this important department of the art courses:

The Riverside Art Series by E. M. Hurll, published by the Houghton, Mifflin Co., at 75 cents for the Library edition, or 50 cents for the School edition. Each book within the limits of 100 pages gives a portrait of the artist, a brief account of his life and works, with an interpretation of the fifteen sepia prints it contains. This series embraces among others the works of Millet, Rembrandt, Raphael, Michel Angelo, Murillo, Reynolds, Titian, Landseer, Correggio, Vandyck.

Anything that Chas. H. Caffin writes on art is very readable and helpful. The following are especially recommended:

A Guide to Pictures, published by Doubleday, Page & Company for $1.25. It contains fine prints of fifteen paintings by different artists and gives suggestions for their study.

How to Study Pictures. published by The Century Company for $2.00. It adopts the parallel method of study and gives fifty-six prints by fifty-six different artists arranged in pairs for study.

The same publishing company has issued a series by the same author, taking up the study of artists' works by their countries. The following are illustrated by about forty excellent prints and contain able discussions on the principles according to which the various national schools of art were shaped: *The Story of French Painting, The Story of Dutch Painting and the Story of Spanish Painting.* The price of each is $1.50.

How to Enjoy Pictures, by E. S. Emery, is one of the most helpful and interesting books in this department. It is published by The Prang Educational Company for $1.25.

Masterpieces in Colour, published by T. C. & E. C. Jack, are delightful little books by different authors. Each book contains eight coloured prints of a master, with a brief account of his life and works.

Valuable Books upon other Art Subjects.

How Many Mediums?

"Although new methods take time to acquire, it must be remembered that variety is a very important factor in the teaching of elementary drawing. This is proved by the eagerness with which children take to a new mode of expression and the increased earnestness of their work when perhaps they would have lost interest in drawing in a single style. It is neither necessary nor advisable to wait until anything like perfection in

drawing in one medium is reached before proceeding to a second. The main principles of drawing are common to all forms of expression, and practice in one method must promote proficiency in another."

Polak and Quilter in *The Teaching of Drawing*. University Tutorial Press. Price 60 cents.

Of What Use is Art?—

"Some may look upon art as a means of livelihood only, a handmaid of commerce, or as a branch of knowledge, to be acquired only so far as to enable one to impart it to others; others may regard it as a polite amusement; others, again, as an absorbing pursuit and passion, demanding the closest devotion; but from whatever point of view we may regard it, do not let us forget that the pursuit of beauty in art offers the best of educations for the faculties, that its interest continually increases, and its pleasures and successes are the most refined and satisfying."

Walter Crane in *Line and Form*. G. Bell & Sons. Price $1.50.

These books should be in every art teacher's library. They may all be obtained through any of the publishers who advertise in this journal.

S. W. P.

Teacher—What are the different effects of heat and cold?

Ichabod—Heat expands; cold contracts.

Teacher—Correct, give example.

Ichabod—In summer when it's warm, the days gits to be very long. In winter when it's cold, the days gits to be very short.

Teacher—Very good, Ichabod, you may go to the head.—*American Education*.

FATHER (meaningly)—Who is the laziest boy in your class, Tommy?

TOMMY—I don't know, pa.

FATHER—I should think you should know. When all the others are industriously studying or writing their lessons, who is it sits idly in his seat and watches the rest, instead of working himself?

TOMMY—The teacher.

—*Primary Plans*.

The teacher meant to convey a profound lesson. "You must forgive your enemies, boys," she said, "and then your enemies will forgive you. I want you all to try it." The next morning Johnny Jones came to school with a very black eye. "Why, Johnny, what's the matter?" "Aw," replied Johnny, "I've been forgivin' Scrappy Green an' makin' him forgive me."—*Cleveland Plain-Dealer*.

Canadian Artists Series

IV.

"Nature in her calmer moods appeals to me. I am not of a stormy temperament. I must sing my own song in my own way."
Archibald Browne.

FIRST the form, then the spirit; the clothes should not hide but reveal the spirit beneath. This is the principle upon which Archibald Browne founds his art. Without neglecting the objective point of view, he emphasises the subjective aspects in his portraiture of nature. His skill in revealing the very soul of trees and rivers and skies comes from days and nights spent in intimate communion with the scenes he seeks to paint. Some have called him a landscape impressionist. Others have spoken of him as "our Canadian Corot". In some respects both are right. While acknowledging his indebtedness to the inspiration he has derived from the study of the works of Whistler and Corot, Mr. Browne would likely describe his art as Canadian with a strong Scotch accent.

Archibald Browne was born in Liverpool in 1866 of Scotch parents. He was educated in Scotland, and was serving an apprenticeship in the City of Glasgow Bank at the time of its failure. Before he was twenty he came to Toronto, where he has resided for almost thirty years. He began to paint when in short frocks and was whipped for it. As a youth he spent his spare time sketching along the valley of the Clyde. Soon after his arrival in Toronto he determined to devote himself to art, and in the face of many difficulties has fought his way to eminence among artists. He was one of the founders of the Canadian Art Club, and is one of its prominent officers and exhibitors.

A striking individuality marks his landscapes. In so many of them he has succeeded in catching and transfixing nature in some evanescent mood of tranquility, mystery, or pensive tenderness. Scenes along the banks of the Humber and the Don, at the Island and on the Bay, old landmarks of the city and the surrounding country, admired for their beauty or for their associations, have been preserved by him in scores of splendid oil paintings and pastels. At the same time in them are represented the effects of light and atmosphere for the changing seasons and the passing hours. The sultry beauty of the midsummer night, the mingling of mist and sunshine at the day's awakening, the luminous witchery of the moonlight, the mystery and tenderness of the twilight, are depicted with a master's skill. The trees are his special delight, and exhibit an affectionate rendering, sometimes standing like "silvery fountains transfixed in air", at other times blending their feather-like masses

of foliage with the light tones of the sky or the purple haze of the distance.

"Bewitchment"

Lent by D. R. Wilkie, Esq. By Archibald Browne, C.A.C.

The frontispiece and the two pictures accompanying this article are fairly representative of the art of Archibald Browne. Like three stanzas

of an exquisite poem they tell the story of the joy of spring, the charm of summer, and the glory of autumn. A study of these reveals the close kinship that exists between his pictures and poetry.

"A Spring Song" shows us a beautiful spot in the valley of the Humber at that season of the year

"When all the wood stands in a mist of green."

How marvellously the forming foliage blends with the tones of the sky

Archibald Browne, C.A.C.

above, as its reflection with the tones of the river below! The light and life of the picture recall Browning's lines:

"The year's at the spring,
And day's at the morn;
Morning's at seven;
The hillside's dew-pearled."

"Bewitchment", a scene on the Don, surely discloses the place where fairies love to meet and dance their merry rounds. It is a mid-

"The Valley"

Lent by Arthur S. Hardy, Esq. By Archibald Browne, C.A.C.

summer night's dream, full of interest and mystery. Trees and water are under the spell of witching moonlight. The ruins of the old mill in

the distance lend their enchantment. Ghostlike they stand suggestive of a Roman viaduct in an old-world scene.

"The Valley" represents an autumn scene on the Narrows between Lakes Couchiching and Simcoe. The deepening shadows, the falling leaves, the pervading sadness proclaim the year's decline. At the foot of that dark escarpment the disciple of Izaak Walton will undoubtedly find good fishing.

One can scarcely believe that such masterpieces are produced in the heart of a busy city. Nature poses for the artist on the hillside and in the valley, by the lake and by the stream; then transfers her bright presence to his studio on Toronto street that he may complete her portrait. S. W. P.

Book Reviews.

German Grammar, by G. H. Clarke, M.A., and C. J. Murray, B.A. 404 pages. Cambridge University Press. G. P. Putnam's Sons, New York. Price on application. Contains no exercises and no appended vocabulary. A book of reference. From the preface: "In these days of 'new methods' and 'short cuts' it is perhaps almost a heresy to speak of teaching grammar for its own sake. Yet many examiners report unfavourably, especially as regards the ability of the average candidate to write a foreign language with anything approaching grammatical accuracy. In the present book the authors have endeavoured to give modern usages to be found in the works of the best writers, rather than the stereotyped rules of grammarians." The treatment of German grammar is exhaustive. There are good reference lists, as, for example, of exceptions to noun declensions, and of old conj. verbs which omit *-e* in the imp. sing. The book is perhaps a little too advanced for beginners in German, but for teachers, and for students in the universities and in the upper forms of our High Schools, we would consider it as one of the best reference grammars that we have seen. J. B. W.

A First Numerical Trigonometry, by Borchardt and Perrott. Pp. 293. Price 2s. 6d. 1913. G. Bell & Sons, London.

This volume has been written to supply a growing demand for a text in trigonometry suitable for lower classes in secondary schools. The subject is developed in a simple and practical manner, and the attention of the pupil is drawn to the practical applications of the subject rather than to the theoretical aspects of it. In Ontario schools the trigonometry has become much more practical since the pupils have been allowed to use tables on the examinations. The exercises in the text used in most of the schools are not well selected to suit present conditions, and teachers would find much in "a first numerical trigonometry" which would supply the want in this respect. J. T. C.

Current Events

Home Rule: The Last Stage.—On March 9th Premier Asquith, introducing the second reading of the Irish Home Rule Bill, made his final proposal toward a peaceful settlement of the question. His proposal is to exclude from the operation of the Home Rule Bill, for a term of six years, any of the nine counties in Ulster that by a majority vote of qualified parliamentary voters decide in favour of such exclusion. Voting will take place before the Home Rule Bill goes into effect and the period of six years will begin with the opening of the first session of the Irish Legislature. A vote will not be taken in any county unless a petition to that effect is signed by one-tenth of the electors.

At the end of the six years the counties that had voted for exclusion will automatically come under the jurisdiction of the Irish legislature, unless the Imperial Parliament otherwise decides. In the meantime they will continue to be governed, as nearly as possible, as they are at present and will continue their representation in the British House of Commons.

What is the advantage, then, it may be asked, of postponing the inevitable for six years? In answer Mr. Asquith points out that in the meantime there are bound to be two general elections in Great Britain and thus the people will have plenty of opportunity to pronounce an opinion on the Irish policy of the government and may, if they wish, alter it. Moreover, after six years of actual government of Ireland by an Irish legislature, the people of Ulster may come to believe that their fears were groundless and the feeling of Irish nationality may triumph over the fears that now drive Ulster to threaten armed resistance. Thus in six years there might be no Ulster problem.

The immediate effect of the adoption of Mr. Asquith's solution of the Ulster problem will be, if acted upon, to exclude probably four counties, including the cities of Belfast, and Londonderry. These counties comprise nearly one quarter of the population of Ireland. It will probably also have the effect of lessening considerably the sympathy that is now felt in England for the Unionist party in Ulster. How strong that sympathy is cannot easily be determined. It is worthy of note that many by-elections have been fought in Great Britain since the Ulster covenant was signed and that at these elections the main question for debate has not been the Irish problem, but the Insurance Act, or the land question, or some other local issue.

Mr. Asquith, however, has doubtless taken every care to inform himself on the subject and evidently considers that the danger of serious

resistance in Ulster is very real. The importation of arms to Ireland has been forbidden and he has seen fit, now, to make an offer of compromise that a year ago would probably not have been considered.

Sir Edward Carson, speaking for the Ulster Unionists, asks that the six year limit be done away with, thus leaving nearly half the counties of Ulster permanently out of the operation of the Home Rule Act. He stated that if this were done he would feel it his duty to go to Ulster and call a convention, presumably with the idea of accepting such terms. It is, however, impossible to believe that the Irish party, which Mr. Asquith has led so far in the path of concession, can be persuaded to accept the suggestion of Sir Edward Carson. The English mind is fond of compromise and Mr. Asquith has doubtless strengthened himself very greatly by the offer of settlement which he has made. To the public generally it will appear something like this: the Unionists have demanded that the question of Home Rule be submitted to the people. The chief reason for the demand has been the feelings of the Unionist minority in Ulster. Well, so far as Ulster is concerned, the new provision insures that the question be open for public discussion at a general election, not only once, but twice before Home Rule touches any county in Ulster where the majority are opposed to it. It looks reasonable and it will doubtless go far toward settling the doubts of the British voter who really didn't know what to think about it.

Politics in Mexico.—Everybody is waiting for something to happen to President Huerta. Everybody seems to think that he cannot hold on much longer, but nobody seems to be able to say exactly why. He controls the wealthiest part of Mexico and the three Constitutionalist armies opposed to him are apparently not acting in concert. Their leaders own no common chief, nor do these Constitutionalists appear to have evolved any leader with sufficient control over his forces to insure his fitness to lead in the establishment of constitutional government in Mexico, if they should be successful in driving out President Huerta. Acts of violence have extended to foreigners, British and American, and their governments have not been able to obtain satisfaction. But even this does not seem to have shaken the determination of President Wilson against armed intervention or to have altered the intention of the British government not to embarrass the government of the United States by taking direct action themselves. Indeed it is difficult to see what action Great Britain could take short of armed intervention or how even the presence of a British army could obtain satisfaction for the death of William Benton unless they were prepared to go the length of occupying all Mexico. For Benton met his death, not at the hands of the nominal government, but at the hands of one of the insurgent forces.

The only positive measure so far adopted by President Wilson has been to raise the embargo on arms and thus restore to both parties in Mexico further means of continuing the struggle. It is generally supposed that this will give an advantage to the insurgents.

President Wilson is doubtless well informed as to conditions in Mexico and personal confidence in him has won to the support of his policy, not only the confidence of the people of the United States, but also the cordial support of the government of Great Britain. W. E. M.

Hints for the Library

Introductory American History, by Bourne and Benton. Cloth 270 pages. Illustrations and maps. 60 cents. D. C. Heath & Co, New York. This book follows the plan of study recommended by the Committee of Eight of the American Historical Association. Only those features of early civilisation and those incidents of history have been selected which appear to have a vital relation to the subsequent fortunes of mankind in America as well as in Europe. Selections have been made from the history of Greece, of Rome, of England, of Spain, of Holland and of France.

History of the United States. by Bourne and Benton. Cloth 598 pages. Illustrations and maps. D. C. Heath & Co, New York. The Canadian teacher of the history of his own country is often anxious to know the other side of the story of such stirring events as the Revolutionary War in the United States and the War of 1812. Again, when teaching the early history of Canada, we are apt to emphasise too much the French occupation and our classes get no idea of how, when, or where the British came to this continet until the latter are suddenly introduced as the mysterious friends of the Iroquois. It has not always been easy to obtain a History of the United States in which one could find an unbiassed account of incidents in our international history, but the authors of this book seem to have done their work without prejudice. Like the Introductory American History, this text-book is based on the pedagogical principles laid down by the Committee of Eight. It is well written and holds the interest of the reader. The importance of the geographical setting of history has been kept constantly in mind.

English History Source Books. 1*s*. each. B. Bell & Sons, London. In addition to the four volumes already reviewed, we have recently received *The Welding of the Race* (449–1066) and *From Palmerston to Disraeli* (1856–1876), the former of which is especially useful for the teacher of history in Public School classes. We again recommend this series as a very valuable aid to the teacher of British History.

Notes and News

[Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this section.]

Mr. G. B. McQuarrie, formerly Principal of Beamsville High School, has been appointed to the staff of the Oakwood High School, Toronto.

Mr. John A. Peterson, of Carroll, Man., has been appointed Principal of the Public School, Boissevain, Man.

Mr. S. G. Gilliland, Owen Sound, of last year's class in the Faculty of Education, Toronto, has been appointed Principal of Magnetawan Public School.

Mr. Herbert M. Tennant, a former student in the Faculty of Education, Toronto, is at present Principal of the Public School, Cobden, Ont.

Mr. E. D. Hendry, of last year's Faculty of Education class, Toronto, is Principal of the Kemptville Public School.

Mr. Thomas Dowler, formerly of Vankleek Hill, has been appointed to the position of Principal of the Prospect Avenue Public School, Port Arthur, Ont.

Mr. A. D. Hone, a former graduate of the Faculty of Education, Toronto, has been appointed Science Master in the Peterborough Collegiate Institute.

Mr. David Spiers, for forty years a member and for twenty years chairman of the Galt Collegiate Institute Board, has resigned and is succeeded by Dr. Wardlaw.

Miss Carter has been added to the teaching staff of the Weston Public School.

After teaching in S.S. No. 9, Innisfil, for twenty-five years, Mr. J. A. Corbett, of Thornton, Ont., has resigned. In these years of so many changes of teachers, it is a notable thing for a teacher to remain for a quarter of a century in the same rural school.

Professor Frank Johnston Goodnow, of Brooklyn, legal adviser to the Chinese Government, has been appointed President of Johns Hopkins University.

A class to teach English to foreigners will be started in the basement of Queen Victoria School, Belleville. The class will be open two nights in the week.

Principal P. G. Might and his staff of the Landsdowne Public School, Spadina Crescent, Toronto, are to be congratulated on so successfully and safely marshalling over nine hundred pupils out of the burning building. We are pleased to note that temporary accommodation for the

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classes of this, one of Toronto's most central schools, is being provided, though Principal Might may, for a time, have some difficulty in finding where all of his classes are located.

The Paisley Public and Continuation School was recently destroyed by fire.

A new Public School was opened early last month at Elk Lake, Ont. About one hundred and fifty persons attended the opening ceremonies which were held in the school building. Tea and cake were served and a short programme of music was furnished by the children.

A fine new Collegiate Institute was recently opened at Strathroy when over one thousand guests were in attendance Addresses were delivered by Duncan C. Ross, M.P., Hon. W. J. Hanna, Provincial Secretary, a former student of Strathroy Collegiate Institute, C. A. Mayberry, Principal of Stratford Collegiate Institute and President of the O.E.A.; Dr. Maxwell, Public School Inspector of Essex; Mr. Henry Conn, former Science Master of Stratford C. I., now Public School Inspector of Lambton; H. D. Johnson, Public School Inspector of West Middlesex; W. D. McPherson, K.C., M.P.P., of Toronto, a former student; Dr. Harley Smith, of Toronto, and Duncan MacArthur, M.P.P., North Middlesex. At the close of the afternoon session, ex-Mayor Geddes, on behalf of the citizens, presented Principal Gundry with a large purse of gold. In the evening a musical entertainment was given in which many of the students took part.

The Brantford Public School Board have decided to establish a dental clinic in connection with their Public Schools.

Mr. Harold C. Knox, of last year's class in the Faculty of Education, Toronto, is teaching in the Continuation School at Metcalfe, Ont.

The old boys of Upper Canada College recently honoured one of their old masters, Mr. William Wedd, M.A., with a purse on the occasion of his eighty-ninth birthday. Statesmen, lawyers, judges and business men have received their education in the classics from Mr. Wedd and the committee which presented the gift was composed of several who have themselves passed their allotted span. Mr. Wedd's association with the U.C.C. dates from the thirties when he himself was a College boy.

At the recent meeting of the Hamilton Teachers' Institute the following officers were elected: President, Mr. R. J. Hill; Vice-President, Mr. E. Morrison; Secretary-Treasurer, Miss K. McCandlish; Executive committee, Misses K. McCandlish, McDonald, Banting, Dingwall and Mr. M. Kerr.

Professor Robert Kennedy Duncan, head of the Industrial Institute of the University of Pittsburg, and one of Brantford's best known and most brilliant sons, died recently at his home in Pittsburg. Prof. Duncan was about forty-five years of age and was born in Brantford,

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where he received his early education, which he completed at the University of Toronto. He soon became a leader in the work of chemical research and was recognised as an authority in his sphere. He also at the time of h s death held a chair in the University of Kansas. Norman Duncan, the author, and Ernest Duncan, are brothers of the deceased.

By an order of the Provincial Department of Education the dates for the Junior Entrance examination have been set for June 17th, 18th and 19th, and the Junior Public School Graduation for June 15th to 19th. All candidates must notify the Public School inspector or their principal before April 15th.

It has been announced that the Cadet Camp at Niagara-on-the-Lake next summer will begin on Monday, June 29th, and continue until Saturday, July 4th.

The Board of Education for the City of Toronto have obtained from the Provincial Government the site on Bloor Street, purchased some years ago by the Government for the new Government House. On this they intend to build a new Collegiate Institute to replace the present Jarvis Street Collegiate. They are also purchasing additions to the property recently obtained on Shaw Street, on which to build the new Commercial High School.

In connection with the course of evening lectures provided by the Education Department for the students in the Faculty of Education, Dr. F. W. Merchant, Provincial Director of Technical Education, spoke recently on some phases of the problem of industrial or vocational education as related to the public school. Dr. Merchant made a strong plea for more activity on the part of the younger children and an extension of the course in the higher grades along industrial lines. This, the speaker believed, would be an inducement for pupils to remain longer in school with a view to the better preparation for their life work.

A deputation from Sudbury recently waited on Hon. Dr. Pyne, Minister of Education, to ask that the regulations be so modified that the School of Mining at Sudbury, and the Sudbury High School might carry on co-operative work between them. The deputation claimed that, owing to the distance of some of the mines from the town, the men working in the mines were unable to take advantage of the night classes now provided. The Minister promised to give careful consideration to the matter.

A deputation from the eastern counties of the Province waited upon the Minister of Education and the Provincial Secretary urging the consolidation of many of the small rural schools of those counties. They pointed out that under present conditions, owing to the scattered English-speaking groups, the classes were small and the burden of providing adequate instruction was proving too much for the ratepayers.

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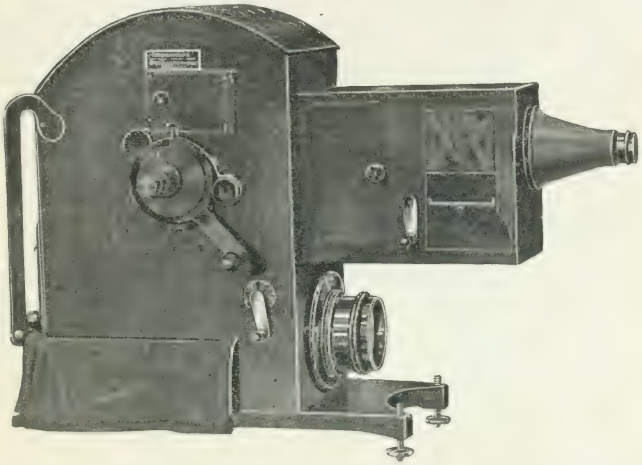

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Mr W. H. Taft, ex-president of the United States, has accepted the invitation of the University of Toronto to give the opening series of lectures in the newly established foundation called the Marfleet Lectureship. Mr. Taft will give three lectures in the Marfleet Foundation on three successive days. The subject will deal with matters of much international interest as between the United States and Canada. The dates will be arranged before the opening of the University session of 1914-15. The Marfleet Foundation had its origin in this way: Three years ago, Mrs. Marfleet, of Illinois, consulted President Falconer as to a gift of $5,000 which she proposed to make to the University as a memorial of her late husband. She explained that a number of years ago she and her husband spent a winter in Toronto. They were shown considerable courtesy by citizens, and their intellectual interests were stimulated by such opportunities as the university afforded to visitors. As a mark of their appreciation of these kindnesses this gift of $5,000 was offered, with the suggestion that it be used to found a lectureship, to consist of a course of three lectures to be delivered once every three years, the subject of each course to be of public interest in the life or history of the United States and Canada, and the lecturers to be chosen from among men of distinction in public affairs or academic circles in either country.

The increasing popularity of "Practical Course in Touch Typewriting in business and high schools ", is shown by a recent order received by Isaac Pitman & Sons, 2 West 45th Street, New York, from the Foreign Department of the Underwood Typewriter Company, New York, for 1,000 copies of this work to be shipped to some of the leading cities in China and Japan.

MANITOBA.

The Ninth Annual Convention of the Manitoba Educational Association will be held in Winnipeg, April 13th, 14th, and 15th, 1914. The Executive has been fortunate this year in obtaining the consent of Dr. Nathaniel Butler, of the University of Chicago, to attend the Convention. Dr. Butler will address the Convention twice, on subjects which will be announced later. Other speakers will be Dr. Bland, of the United Colleges, Winnipeg, and Dr. Norman F. Black, of Regina. In the Elementary Section, the programme will deal with Physical Culture, Children's Games, Geography and History, all of which subjects will be handled in a practical manner. In connection with this section, there will also be a practical class demonstration by pupils of a rural school. The Secondary Section promises to be of unusual interest, as the Executive are making arrangements for a conference between University and High School teachers, for a discussion of the High School Course. During the pro-

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gress of the Convention, there will be classes for instruction in Basketry, Paper-folding and Cutting, Sewing and Art. In accordance with a previous announcement there will be an exhibit of WORK from rural schools. Twenty schools sent in exhibits of work last year. The Executive hope for a still keener competition this year. Prizes of $25.00, $15.00 and $10.00 are offered for the three best exhibits. The usual Convention rate of a single fare will be granted by the various railroads. Those coming to Convention should secure Standard Certificates from the Ticket Agent when purchasing their tickets.

NOVA SCOTIA.

The High School Course of Study is under process of revision. The committee appointed for this purpose met in December, and will meet again at Easter. Their recommendations will be submitted to the Provincial Educational Association at Halifax next summer.

A successful Teachers' Institute was held at Middle Musquodobit, Halifax County, February 18th, 19th and 20th. Inspector Creighton kept his teachers busy during those three days. Inspector Craig will hold an Institute for Cumberland County at Oxford, April 8th and 9th.

School Gardening is meeting with a very encouraging reception throughout the province. The garden on the school grounds is not so popular as the Home Gardens. From the amount of seeds and shrubbery ordered by the children, we may safely predict an active gardening campaign during the coming summer.

Supervisor Lay, Inspector Craig and Principal Morehouse, of Amherst are working together to make Amherst Schools among the most advanced in the Province. They are introducing up-to-date subjects and methods in a way that must surely tend towards the betterment of Amherst.

Teacher—John, can you tell me what is meant by a steward? John—A steward is a man who doesn't mind his own business. Teacher—Why, where did you get that idea? John—Well, I looked it up in the dictionary and it said: "A man who attends to the affairs of others".—*London Mail.*

A school teacher recently received the following note from the mother of one of her pupils:

"Dear Mis. You writ me about whippin Sammy. I give you permission to beet him up any time he wont lern his lesson. He is jest like his father an you hev to beet him with a club to lern him enything. Pound nolege into him. Don't pay no attention to what his father says. I will handel him."

"October on the Fraser River"

By F. M. Bell-Smith, O.S.A., R.C.A.

And the more that men's minds are cleared, the more that the results of science are frankly accepted, the more that poetry and eloquence come to be received and studied as what in truth they really are,—the criticism of life by gifted men, alive and active with extraordinary power at an unusual number of points,—so much the more will the value of humane letters, and of art also, which is an utterance having a like kind of power with theirs, be felt and acknowledged, and their place in education be secured.

—Matthew Arnold.

The School

"Recti cultus pectora roborant"

Editorial Notes

A Great Teacher. Mr. Thomas Carscadden has resigned the principalship of Galt Collegiate Institute after thirty years of service. This simple announcement arouses a host of thoughts and feelings.

Galt has been highly favoured in her Collegiate Institute. Her High School was the first to become really great in Ontario. It was the first High School to be recognised as a Collegiate Institute. Indeed, it was Ryerson's model in his definition of a Collegiate Institute. As a Collegiate Institute it has always held rank among the first. Its teachers have been great. No school can show a nobler group of headmasters than Tassie, Bryant, and Carscadden. Its students have also been great. Out of its doors has issued an unceasing stream of young men who in all walks of life, professional, commercial, or industrial, have helped to give tone and colour to our Canadian civilisation.

Mr. Carscadden's withdrawal is not unique. The great expansion of the Ontario High School system in the early 80's brought to the front a series of famous headmasters—McMurchy, Connor, Macmillan, Knight, McBride, Strang, Fessenden, Carscadden. Having piloted our High Schools through their constructive period, and having borne for years the burdens inseparable from High School administration, these men began one by one to drop out of office. Fortunately most of them are still with us, and most of them are still engaged as instructors in schools where formerly they served as administrators.

To obey where once he commanded, to be an assistant where once he was principal—a man is not often permitted, nor will he often ask, to do this in factories or offices. It is to the credit of the teacher in Ontario that he frequently asks, and of the schoolroom that it always consents. Only great men will cheerfully deny themselves in behalf of others. Many of our great headmasters have done this. And now Thomas Carscadden has done it.

It was just like Mr. Carscadden—quiet, clear-eyed, unselfish, sane, honest before God and man—and his fellow-teachers.

Let us all praise famous men,
Men of little showing;
For their work continueth,
And their worth continueth,
Broad and deep continueth,
Far beyond their knowing.

Summer Sessions.—The Canadian provinces have provided amply for the training of those who wish to be teachers. In recent years most Canadian universities and departments of education have begun to devise ways and means of improving the status of teachers who are already in service. No Canadian province has done more in this regard than Ontario. Her universities offer Summer Courses which look towards degrees in arts, degrees in pedagogy, and better scholarship in many High School subjects. Her Department of Education offers free courses, with examinations and teachers' certificates, in many school courses or subjects, such as art, music, manual training, household science, physical culture, commerce, agriculture, Entrance to Normal School, and Entrance to Faculties of Education.

What Summer Course do you intend to take?

"**Waste in Education**."—A note under this heading in the April number of THE SCHOOL referred to waste through irregular attendance and unprofitable exercises. A device adopted by Principal Plewes, of Chatham, Ontario, calls attention to another form of waste—a waste through imperfect records.

The population of the Canadian provinces is in a state of flux. In Ontario, for example, there is a steady movement from the old and southern parts to the new and northern parts, a more vigorous movement of Old Country people into rural and urban Ontario, and the most extensive movement of all from rural districts to urban centres. This means a great shifting of the school population, so great that the School Regulations have made special provision for the honourable transfer of a pupil from school to school.

As the pupils shift, so the teachers. Ontario teachers move westwards; they move from country to town; they move from schools with small salaries to schools with large salaries; they move out of the profession. Some years ago it was found that the average professional life of an Ontario Public School teacher was less than seven years. In these seven years he may have taught in several schools. Indeed, inspectors have been heard to declare that half their schools shift their teachers annually, and many semi-annually. The shifting of pupils means that the teacher never knows all his pupils and their work. And one or two unknown pupils in a class may distract and monopolise the teacher's attention for weeks. The shifting of teachers means that neither teachers

nor pupils know one another, and must spend weeks in 'marking time' while they become acquainted. The shifting of teachers and the shifting of pupils end in the retardation of pupils—another form of a great waste in education.

Principal Plewes hopes to reduce some of this waste by a card catalogue, which contains a detailed and progressive story of the school life of each boy or girl. Supplemented by the teacher's diary of each week's work in each subject in each class, the card catalogue becomes a record which in time every school will institute, and which will be the only effective check upon this form of waste in education.

A Consolidated School.—The rural school problem is the biggest school problem of Canada. Newspapers, school journals, teachers' associations, departments of education, training schools are everywhere at work upon the problem. Many solutions have been suggested. Several have been tried, or are being tried. On one solution all educationists are agreed—the Consolidated School. Inspector Lees endorsed this solution in his articles on the rural school in *Farm and Dairy*. Mr. Prendergast endorsed it in the March issue of THE SCHOOL. Dr. Miller, whose able work on rural education in Canada is referred to elsewhere in this issue, does not hope for a solution outside the Consolidated School.

The rural school problem is not confined to Canada. It is the biggest school problem of the United States. But the United States have gone much farther than some of the provinces of Canada, especially Ontario, in the acceptance of the Consolidated School. Colorado has not been able to move rapidly, but even she can boast such a Consolidated School as that at Cache La Poudre.

"Only a year ago some 6 schoolhouses, scattered at random over a very large territory, supplied 207 families with such school facilities as were then available. Two of the buildings were of native stone, the others of frame; they lacked modern conveniences and were quite unable to offer a modern training for agricultural life. Now a large, dignified, central building, erected at a cost of $35,000, has absorbed all these outlying schools and is rapidly becoming the centre of community pride and aggressive community life. All this was not done without a struggle. A great many people here, as in other places, clung tenaciously to the little local school, fighting the change even in the courts. The majority, however, favoured the change and had their way. Many of the people who originally opposed the plan now praise it the loudest; and few, if any, would care to go back to the old conditions.

Four entire school sections and parts of two others comprise the new consolidated school section; 207 families live within reach of the new school; 266 pupils are at this time enrolled in its 12 grades, 47 being in

the well-equipped high-school department; 8 teachers are employed, 5 in the grades and 3 in the high school. What appeals particularly to an observer of the school work is that while the universal elements of a broad education are taught the teachers are mindful that theirs is a rural community and that they are preparing Colorado farmers and fruit growers for life work. With this in mind, they are doing everything in their power to root the school work to the soil.

The buildings are set in 4½ acres of good, irrigated land. The playground is ample for all purposes. There are baseball and football fields, tennis courts and playroom for the younger children. A small orchard of 5-year-old trees forms the beginning of an excellent experimental plot. With the opening of spring there is a plan to begin work in budding and grafting. The children are to have individual garden plots, and home-garden work has also been planned.

A good, one-room schoolhouse which was already on the grounds has been remodelled at a cost of $700 into a very satisfactory six-room cottage for the principal of the school. Another one of the old buildings has been made into a good barn and shed for the horses and transportation equipment. The main building is an imposing structure, built of native sandstone and pressed brick. It is three stories high and is equipped with steam heat, fan-ventilating system, and indoor toilets, baths, and bubbling fountains.

The janitor lives with his family in a suite of five rooms in the basement, which, by the way, is built in such a manner that its cement floor is one and a half feet higher than the grade of the school-yard. The building is supplied with agricultural and biological laboratories, good library, rest rooms for the women teachers, and a large assembly room used, among other things, for community meetings and farm lecture courses, which are being held throughout the year; for, beyond everything else, this is a community school which strives to help the parents as well as the children.

Seven transportation wagons of the latest make convey 163 children living at a distance to and from school. The system has proved a very satisfactory one for all concerned. There is no tardiness with transportation; attendance is at the maximum; and the cost for transportation is 9 cents a day per pupil."*

Feminine Gender.—Teacher—Why is the English language spoken of as the mother tongue?

Pupil—I think it is because women use it more than men do. —*Nettie R. Miller.*

* Taken from Rural School Letter No. 12, issued by the Bureau of Education, Department of the Interior, Washington.

Play-time

Toronto's Open-Air School

FRED S. DENT

ON the shore of Lake Ontario, just beyond the eastern limit of the city of Toronto, is Victoria Park. With a broad sandy beach, an elevated open space, and an abundance of trees, this thirteen-acre park made an ideal home for the forest school from May until November of last year.

Of course, an open-air school has little need of buildings, and of this equipment there was almost none. Classes were conducted on fine days at picnic tables, blackboards being placed as conveniently as circumstances would permit. The kitchen, the dining-room, the office, and the dispensary were located in an old picnic pavilion, a relic of the days when Victoria Park was a popular resort. On rainy days the same pavilion served as a wash-room and as a class-room for the three classes. Part of an old bowling alley served as the store-room for blankets, pillows, and other school equipment. As the beds were covered with tarpaulins, they were left outside in all kinds of weather.

The enrolment of pupils was one hundred and ten. The staff consisted of three teachers, a nurse, and three attendants. The latter were assisted in the kitchen by the boys and girls in turn. In this way the pupils received some very practical training in household science.

The pupils for this school were selected by the school nurses of the city staff from the sickly pupils who came under their notice. Home circumstances and the probable benefit to be derived from life in the open air were made the bases of selection, and two hundred children were chosen. From this number were eliminated those who lived so far from the car line that the walk would be a tax upon their health.

At seven o'clock each morning the private car provided gratis by the Toronto Street Railway Company began its trip, picking up the waiting children at various stopping-points. At eight o'clock it reached the end of the line and discharged its passengers. Fifteen minutes' walk brought the pupils to their school in the park. Upon their arrival they

"Wash and get ready for Dinner"

were served with a breakfast of porridge, bread and milk, shredded wheat biscuit, or boiled eggs. Next came tooth-brush drill, and then the beds were made. After this lessons began and continued until 10.15, when there was a brief recess in order that each pupil might have a drink of milk. Lessons again until 10.45, and from then until 11.30 physical drill, dances and organised games. Fifteen minutes was spent in washing for dinner. The menu for this meal was soup, stew, roast beef, potatoes or beans, and pudding. Tooth-brush drill again, and then all went to bed and slept for two hours. Let me emphasise this feature of the day's programme. They did sleep, and slept soundly. When they awoke another drink of milk was served, after which each child put away his or

her own bed, from little five-year-old Gracie and six-year-old Willie to May, aged fourteen, and another Willie of thirteen. A half hour's study followed by an hour's play brought washing-up time. Supper followed, tooth-brush drill succeeding it, and then all lined up and marched to the car which left for the city at 6.15.

The object of the school was two-fold. Health first, then education. This does not mean that there was any clearly-defined division of duties. One recollection I have of the school is that of a collection of caterpillars belonging to the nurse, which served to instruct one group of children who were interested in nature study. Another is that of the principal at washing time with a line of boys before him, each presenting his ears and

"The Tooth-brush Drill"

neck for approval. Disapproval usually meant that the delinquent was sentenced to be re-washed by another boy.

The oversight of health was the peculiar function of the nurse. Once each week every child was examined for health and cleanliness. Weights were taken weekly. The amount of milk consumed by each child was recorded daily. Where necessary, hair was ordered to be cut, and a comb of very small calibre was applied daily. Ear dressings were applied, sores of any kind bandaged, and as opportunity offered little health talks were given. Tooth-brush and nose-blowing drills were carried on by numbers. The two-hours' sleep each day was carefully guarded from any disturbing influence. Without exception, rain or shine, thanks to the

tarpaulins, each child had his or her nap every day. Cleanliness and tidiness in putting away the beds were insisted upon.

Although the time-table called for only some two hours of school work each day, it might be said that the children were in school the whole time. Each child was made fully responsible for the prompt and exact performance of each part of the day's routine in which he was concerned. Excuses of any kind for non-performance of duty were always frowned upon. The children as a consequence absorbed system, and yet, because they were made to understand the reason for everything, they did not lose spontaneity of thought and action.

In the class periods proper the usual course of studies was followed. As many of the pupils were backward owing to long-continued ill-health, much emphasis was placed on the "three R's", but the so-called frills received their share of attention.

Then there was the play activity. Girls played nearly all the games that the boys did. The two exceptions that I recall were the team battles and rugby. The ones most enjoyed by the girls were prisoner's base, football, baseball, and with many, boxing and singlestick. The one that the boys took up with most zest in the fall was rugby. One of the features of closing day was a match between two picked teams of boys. Each side had a code of signals, including fake bucks, and "criss-crosses". Moreover, boys who at the beginning of the year would have wept at a slap, took a kick on the head without a whimper.

Even with the meals, the cost may be made less than that of the present system, and the results are very satisfactory. Those children who spent the summer in Victoria Park have learned that "life is more than raiment". They have learned to live naturally and to exhibit spontaneity.

Recreative Seatwork

MARGARET D. MOFFAT
Bolton Avenue School, Toronto

ONCE a three-year-old boy was told the jingle of Mother Hubbard's dog. When he had heard the first stanza, he reflected a moment or two and then inquired, "Why didn't the dog go out in the yard and hunt hisself a bone?" Providing seatwork for the little children in the country school resolves itself into a project of the teacher "hunting herself a bone". Recreative seatwork consists in allowing the children to make something or the picture of something as a means of self-expression, by drawing, painting, sewing, weaving, scissoring and modelling. As a rule the children go to school provided with water-colours or crayo-agraphs, and are prepared for drawing. There is no material, however, for scissoring and mounting. If you have trustees who are at all pliable, see whether you can get them to give you an allowance for school supplies. Write to a firm which has kindergarten or school supplies advertised in your school journal. Ask for a catalogue with prices. Take this to your trustees and have them help you to make a selection. They never think of these things unless you speak about them. Rural school teachers in Ontario should attend some of the sessions of the Kindergarten Department at the meeting of the O. E. A. to help them with their junior pupils. For manual training much coloured paper is used. It is of several sizes and qualities and sold in packages: grey, 8″ x 12″ for mounting; heavy cover 8″ x 10″, red, terra cotta, brown, olive, blue, green for mounting and construction; tag manilla, cream 6″ x 6″, 6″ x 8″ and 12″ x 12″ for construction; light cover, red, orange, yellow, buff, blue, green for illustrative cutting and for bordering. For a beginning, brown heavy cover is a good working paper. All illustrative cutting can be done from white paper or even newspaper and mounted upon it. The children can provide their own scissors. Empty ink-bottles cleaned make good paste receptacles. A most satisfactory paste is made from gum tragacanth. Get a few ounces from the drug-store. Make up

only a little at a time. All you do is to add cold water. A piece as large as a bean will take a quarter of a cup of water. If you wish to keep some made up, add a few drops of oil of cloves to preserve it. One trouble with scissor-work is the falling of scraps upon the floor. Even though the children try to be tidy, they are nervous and spasmodic in their movements, and scraps upon the floor are unavoidable. Get, if you can, a toy broom and dust-pan and you'll never lack volunteers to tidy the floor. Keep all the manual training things in the cupboard except when you want them used. If you don't, you'll soon discover why it is necessary.

All Junior drawing is done with paint brush, crayographs or charcoal and massed in. Painting with ink gives good results and saves fussing with water except to rinse the brushes afterwards.

I. Object-drawing.—The winter drawing is nearly all done in black crayon or charcoal or ink; from school-bags, lunch-boxes, rubbers, hockey-boots and skates, toys, sleighs, figure pose of boy or girl (back view) and trees. The children should study one particular tree at a time and practise drawing it in the air outside with their fingers.

II. Skeleton-drawing.—This helps proportion. In a child the body and the legs are equal in length. The knee is at the middle of the leg. The arms reach to the waist with the hands a little below the waist. The children can lay sticks upon their desks for the figures, breaking the sticks in the middle for legs and arms and using split peas for heads. They can then draw the forms made.

III. Illustrative drawing.—In illustrating, the figures should be kept small and the proportion good, *i.e.*, a man small compared with a tree. Outline drawing should not be allowed. Everything should be massed in. If the children outline from a pattern, it should be with the faintest line possible and the whole massed in with crayon or paint-brush so that no outline can be seen. For cutting and sewing a heavy outline is needed.

What to Illustrate.

1. *Occupations.* (*a*) What my father is doing to-day. This is my father ploughing, harrowing, cultivating, seeding, repairing fences,

repairing machinery or the barns, pumping water for the cattle, throwing hay into the mangers, currying the horses, cutting feed, tapping trees, boiling sap. Farm life is rich in illustrative material.

(*b*) Pictures of mother at home. This is my mother washing, ironing, sweeping, making beds, mending, baking, churning.

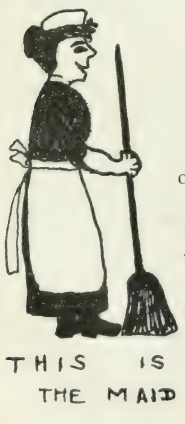
(*c*) Pictures of me at home. Here I am washing dishes, minding the baby, feeding chickens, pigs, calves, gathering eggs, teasing my sister, milking a cow, with Collie bringing home the cows.

(*d*) Other farm pictures—chicken-coop, hen and chickens, calf drinking from a pail, horses at the trough.

2. *Games.*—Boys playing baseball, girls playing baseball. Boys playing marbles. Girls skipping, swinging, teetering.

3. *Season pictures.*—Children making snow-man, playing hockey, skating, sleigh-riding. Pictures showing windy weather; clothes blowing on the line, boys flying kites, man running after his hat, smoke blowing, flag flying, girl with umbrella inside out, windmill, girl with dress and hair blowing; children with umbrella up going to school in the rain. Gardening: cleaning up the yard, boys digging, carrying rubbish in a wheel-barrow, girls raking, measuring and planting.

4. *Lessons illustrated.*—Where drawing paper is not provided the children can use a pencil work-book in which to keep their work. Or they can take pages from a pencil work-book to make a drawing-book, sewing on a stiff wrapping-paper cover. Or they can fold down a sheet of newspaper or wrapping-paper into a small book. The crayons show up very well on newspaper, except yellow, and it does not show on anything. Four pictures can be made of The Arab and The Camel, one on each page.



a. This is the camel asking to be allowed inside the tent.

b. This is the camel with his head inside the tent.

c. This is the camel with his fore-legs inside.

d. This is the Arab pushed outside.

5. *Fairy tales and nursery rhymes illustrated.* The children can fold a piece of paper into a little book

3″ by 5″, sew or pin the centre and draw "The House that Jack Built", and all its connection, one picture on each page. "This is the cat", "This is the maid", and all.

6. *A B C Picture-book.* This consists of a printed capital, a printed small letter, a picture of the object whose name begins with the letter and the name of the object, one for each letter of the alphabet.

7. *Pattern drawing for sewing or scissoring.* If you cannot draw well yourself use tracing paper, tissue-paper or butter-paper and provide patterns. Make envelopes 5″ x 8″ of stiff wrapping-paper to keep your patterns. On each envelope paste a pattern of what is within so that you can select it quickly. On the outside of the envelope with the cat-patterns paste a cat-pattern. Keep these envelopes in a box. Provide patterns for drawings of boys, girls, horses, dogs, cattle, bears, elephants, birds, chickens, fruit and barns, choosing pictures with the simplest outline possible.

Scissoring.—All the drawing subjects can be used for scissoring and mounting. Animals that can stand can be made by doubling heavy tag paper and cutting the animal double leaving the crease or part of the crease joining the two backs, uncut.

Sewing.—Drawings of objects with a simple outline can be made on cardboard and used for sewing. Use the cardboard of clean boxes, starch-boxes and shoe-boxes, if you can get nothing better. The children of second classes can do the drawing from patterns and then prick holes with a darning-needle, on the outline, every half-inch. This is a good measuring exercise for them. Then give the work to the first book children to sew. They sew in and out through the holes once round, then back to fill in the spaces. If you cannot get wool for this, use red thread. For second classes tear up cheap factory cotton into 8″ squares. Let the children fringe them for doilies, draw a picture upon them of an animal, a leaf, a fruit or a ship, and sew upon the outline with the finest running stitches they can possibly make. Use red thread. Boys enjoy this quite as much as the girls do and often do better work.

Bead-work with Straw.—Wet some straw. Have the second book children cut the straw while it is damp into one-inch and half-inch pieces. When the pieces are dried they can be used to be strung like beads. If two needles are used at once the children can make necklaces of different designs.

The Bible Says So.—Small Girl—Why doesn't baby talk, Father?

Father—He can't talk yet, dear. Young babies never do.

Small Girl—Oh, yes, they do. Job did. Nurse read to me out of the Bible how Job cursed the day he was born!

Alexandra School
12 rooms, cost $52,000.

The Evolution of Public School Buildings in London

C. B. EDWARDS, B.A.
Inspector, Public Schools, London, Canada

THE problem of providing school buildings that on the one hand meet the demands of health experts and on the other hand provide adequate accommodation for the intellectual and physical development of the child is much more difficult in an old than in a new city.

The first Public School buildings were erected in London in the "forties". These were constructed of lumber, but in the next decade this gave way to brick. About 1887 the Board of Education decided to establish graded schools throughout the city in which all the pupils of the district could complete the Public School course instead of having the senior pupils go as formerly to a large Central School. This was done by enlarging the small buildings scattered over the city, and erecting a new school on Simcoe Street which is now used as the Model School for the Normal School students. As the population increased, additions were built at the various schools while an attempt was made to furnish proper heating and ventilation by introducing the Smead-Dowd System.

In 1907 the Board adopted a policy whereby in time all the Public School buildings in London would be thoroughly modernised. It must not be imagined that the first attempt resulted in perfection, for evolution had to go hand in hand with economy, but as the plan of improvement progressed successive features of advance in school architecture were added until now nearly all modern inventions in school buildings have been adopted.

One illustration may serve to show how thorough has been the policy of the Board. The rooms are lighted from one side only, the tops of the windows are carried to the ceiling, and the window sills have been lowered to within 30″ to 36″ from the floor, while the space between the windows has been reduced to a minimum. In addition to this, a system has been adopted by which the rooms facing north and east are tinted a light buff, while those facing south and west are coloured a delicate green, the ceilings being a dull white.

Aberdeen School
16 rooms, cost $70,000

Chesley Avenue School
16 rooms, 6 rooms added to rear at cost of $35,000

In its scheme for improving its buildings the Board of Education has led rather than followed public opinion, and has given consideration to the advice of its architects, its inspector and teachers, whose knowledge of school architecture entitled them to offer suggestions.

The co-operation of the Mothers' Club in each school rebuilt or constructed has been manifested in various ways. For example, in the Wortley Road School the Club installed a handsome mantel and grate in the kindergarten assembly.

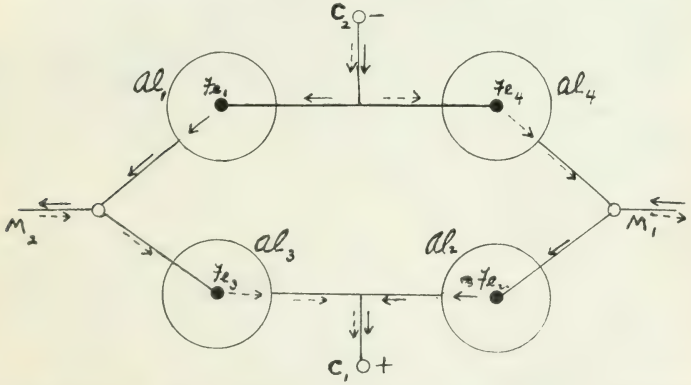
It is a long step from the old log school of pioneer times, with its rude benches and big box stove, to one of the modern structures like the Aberdeen, Alexandra or Chesley Avenue School with steam heat, ventilating fans, wide corridors, telephone connection both within and without the building, comfortable teachers' rooms, nurses' rooms, manual training, and household science laboratories, and an assembly room which can be used by the people of the school district as a social centre.

A Rectifier for Alternating Electric Currents

W. H. MARTIN, B.A.

FOR most of the experimental work in electricity in High Schools a direct current is needed. Such a current can be bought in very few towns in Ontario, and the dry and Daniell's cell have been the source of electric energy. Cells are unsatisfactory for anything but sm all voltages and currents and are expensive.

Hydro-electric or some other alternating current, 25 or 60 cycle, is or soon will be available for almost every High School in Ontario. The following device, which can be made at almost no expense and with very little labour, will convert such an alternating current to continuous direct current at all pressures, at least up to 110 volts, and with a very



high efficiency. This rectified current may be used either directly for experiments or to charge storage cells.

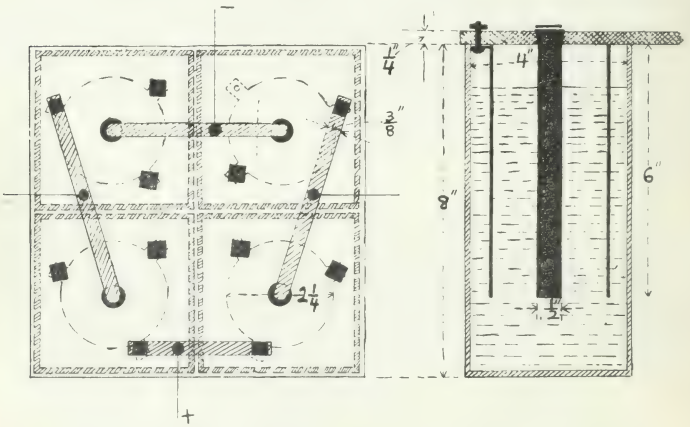
The principle of the device is this—a current will not flow in a cell from an aluminium electrode to an iron electrode, if the electrolyte be a saturated solution of common sodium phosphate or potassium bichromate. It will however flow freely from the iron to the aluminium in such a cell. One such cell, therefore, put into an alternating circuit, would cut out one phase of the current and give a direct current, which would however be an interrupted one.

The above arrangement of four such cells gives a direct current which is not interrupted, but continuous.

M_1 and M_2 are the alternating current terminals. C_1 and C_2 deliver direct current.

Al is an aluminium electrode in the form of a cylinder surrounding an iron electrode Fe. When M_1 is positive, the path of the current is as shown by the solid arrow. Note that the current will not go from Al_4 to Fe_4 nor from Al_3 to Fe_3; but goes as shown through the external circuit even against high resistance in that circuit. When M_2 is positive (other phase) the current goes as shown by the broken arrow. Thus the terminal C_1 is always the positive terminal of the working circuit.

The construction of the cells is shown below:



Plan of the four cells. Section of one cell.

The cells are four prismatic glass jars—fruit jars would do very well. The aluminium electrode is a piece of thin sheet aluminium bent in the form of a cylinder to surround the iron electrode. The four vessels are covered by one cover, which must be a good insulator: slate was used and proved very satisfactory; it is easy to drill and is a non-conductor. Wood well soaked in paraffin would do quite well. To this slate top all the electrodes are fastened so that the top and the electrodes all lift out together—there is thus less danger of short-circuiting. The aluminium electrode has ears cut on it and is bolted to the slate top. The top end of the iron electrode was pounded out a little so that it could not slip through the hole in the slate. Connections were made on top of the slate with copper strips, which were soldered to the top of the iron electrodes, and placed under the nut to act as a washer where joined to the aluminium electrode. Binding posts may be soldered or screwed to the copper strips.

The electrolytes used with equal success were saturated potassium bichromate solution and saturated di-sodium phosphate (common sodium phosphate) solution.

Solubility potassium bichromate	10: 100	15°C.
Solubility sodium phosphate	15: 100	15°C.

Both salts are much more soluble in hot water and so saturation is easily attained by warming.

Always use a rheostat in the circuit M_1 M_2. A good form consists of a dish of very dilute sulphuric acid with two copper electrodes. The dish in these experiments was a glass trough 15″ by 8″ by 6″ with electrodes which could be raised or lowered or slid along a rod so as to vary the resistance. It is well when possible to regulate the current by the rheostat in M_1 M_2 and use as little resistance in the circuit C_1 C_2 as the experiment will permit.

From this apparatus currents up to 5 amperes were obtained without any heating of the cells. The circuit C_1 C_2 was used for electrolysis and was found to give exactly 2 volumes of hydrogen to 1 volume of oxygen for all currents up to 2 amperes. The current in C_1 C_2 was found to be altogether direct with any current up to 5 amperes and with any resistance in the circuit C_1 C_2 up to 200 ohms (the greatest attempted).

Such a current is good for all work using direct current, except experiments, like those on induction, which require a non-pulsating current. For such experiments cells are required, but if storage cells are used they may be charged from alternating current by the use of this rectifier.

Hint for the Library.

Rural Schools in Canada, by J. C. Miller. 236 pages. Price $2.00. Published by Teachers' College, Columbia University, New York City. The author of this book is Dr. J. C. Miller, until recently Principal of Camrose Normal School, and now Director of Technical Education for Alberta. Some of the subjects dealt with are: The training of rural school teachers, comparison of their income with that derived from other occupations, school attendance, building, equipment, and libraries; consolidated schools, advanced classes, duties of inspectors, conditions under which inspectors work, methods of inspecting and supervising. This volume is evidently the result of a most thorough investigation of the rural school problem in all the Provinces of Canada. It will certainly be read with great interest by inspectors, trustees, and teachers.

The Flycatchers

J. H. McDONALD

THE Flycatchers constitute one of the most common and interesting bird families we have. In Central Ontario there are six widely distributed members, three which possess the family cognomen, and three others which, although they derive their names from certain individual features, nevertheless are readily distinguished as belonging to the family by their general characteristics. These members are so common that we are certain to meet them in our excursions afield, and when we know the important family features and the names of the individual members, we can identify them even without the customary fauna. The six common species which we have are the kingbird, phoebe, wood peewee, and the crested, least, and Acadian Flycatchers. Their names all designate some peculiarity which they possess, and when we have ascertained that they are Flycatchers, we have only to observe their actions for a short time in order to decide on their particular names.

However, in order to determine the genus, we must know a few of the most important family characteristics. They are all so distinctive and so common to the family that by a few moments' study even the tyro can have the whole group at his finger-tips. When he perceives them catching flies, that is one step towards their identification, but he must bear in mind that other birds also possess this ability and are constantly demonstrating it. Even our English sparrow is no mean insect-catcher, so the successful student must not be satisfied with that. However, with a few minor details at hand, there is no possible chance of his going very far astray. In the first place, all the members tend to seek the most exposed limbs of a tree. They very seldom perch in the centre of a tree, but seek the dead limbs on the outside, where their view is as little obstructed as possible. From here they continually dart out and seize their passing prey, generally returning to the same perch. In fact, they seem to possess favourite perches, as the same bird may be seen time and again in exactly the same position. Unlike most families, the males are just as inconspicuous as the females, there being no differences in colour between the different sexes. Aside from the difference in size, the heads of the entire family are very much alike. Their bills are rather slender, the eyes are dark and beady, and they all possess more or less of a crest, which is noticed particularly when the bird has cause to express its anger. The prevailing colour of the family is greyish, tinged with various shades of olive. They cannot in any sense be termed song-birds as their calls are

all more or less abbreviated. They are all migrants and are merely summer visitors, their arrivals dating from the last of March to the latter part of May.

Towards the end of March the interested bird-student may have had cause to visit the river which had furnished so many pleasant associations during the preceding summer. Now it looks bleak and deserted, and the ice has been honeycombed by the increasing heat of the strengthening sun, and only awaits a warm rain, so that it may join in its mad race with the spring freshet. The day has been unusually warm, and a noisy crow passing high overhead announces to the world below that it is imbued with the spring-fever and must give utterance to its feelings. This causes the student to wonder just how long it will be before he will be able to welcome his first summer visitor,—when, lo, a plaintive, yet emphatic, little "phoe—be" calls him from his reverie. Out on a branch projecting through the ice, he espies a little grey chap who seems to possess more life than he is able to express. It energetically repeats its welcome, the last syllable of which is higher pitched than the first, and is still further accented by a vigorous flit of the tail, as it announces its name to the world. We immediately put this little harbinger of spring in our bird calendar as the phoebe, and its apparent hardiness in defying the March winds at once wins for it a prominent place in our admiration and affections. As the spring advances, we are constantly on the lookout for this little fellow and we are surprised at the magnitude of its range. It may be found at almost any bridge or deserted building, and even throws aside its fear of man and erects a little domicile above the ledge of his door. However, it seems to prefer the river, no doubt on account of the numerous flying insects which abound there. In colour it is not unlike the female of the English sparrow, but its habits and slightly larger size readily distinguish it from that noisy and quarrelsome degenerate. Its nest, which is found under bridges, on ledges of buildings, or in crevices of cliffs, is an exquisite fabric constructed of moss, root-fibres, lichens, and horse-hair, intricately woven together and strengthened with mud. In it are laid from three to five pure-white eggs. This nest is often built in the same place for several successive years. In some cases it is merely repaired, but in others, where it has not withstood the winter blasts so well, a new nest is constructed on top of the previous one, so that we get a two- or three-story structure. In one case the writer remembers seeing one which comprised six different stories, each story representing a different nesting-season.

The bird which will be most frequently mistaken for the phoebe is the wood peewee. This bird, although slightly smaller, is very much like the phoebe both in habits and colour. Their calls are also very similar, but if particular attention is paid to them they may be readily

distinguished. The phoebe's is jerky and emphatic, while the peewee's is not so brusque, but is faint and sad, and is often prolonged into a lisp. It is sometimes drawn into three syllables as "pee-ah-wee" and also seems to have a certain ventriloquistic quality, as it is difficult to locate the bird by its calls. This difficulty is increased on account of its natural stillness and protective colouring. It is not so dusky as its larger cousin, and the back and flanks have an olive tint which helps to discriminate between the two species. As the name implies, this bird is found in the woods, but it is not restricted to these solitudes, as no old orchard is complete without at least one pair. They seem to prefer the wide-spreading branches of the apple-tree, and the writer cannot recall an orchard, worthy of the name, that did not possess these residents in their season. The nest is one of the most excellent of bird creations and also one of the most difficult to discover. We may be within a foot of it and never see it, so completely is it hidden. It is composed of bark and plant-fibres, quilted together, and ornamented with rock-lichens, and is placed usually on a horizontal branch at the junction of two lesser branches. The eggs, two to four in number, are creamy white, speckled, mostly around the larger end, with reddish brown. The arrival of the peewee is not so early as that of the more daring phoebe, but it may be looked for towards the end of April.

One bird which, if not known by sight, will be known by reputation is the kingbird. As its name signifies, this bird considers itself no small unit in the bird-kingdom, and it reigns supreme in its own domain. It never hesitates to demonstrate its fighting abilities and no bird is too large for it to attack. Many farmers consider it advantageous to have such a capable guardian around their buildings, as no hawk dare molest their chickens with this doughty champion at hand. Unfortunate is the misguided crow that ventures within its sacred precincts. It immediately pursues the discomfited trespasser, uttering its battle-cry at each fresh attack, and returns exultantly to its lofty perch. It is the noisiest member of the family and its shrill, harsh "thsee, thsee" may be heard long before we see the bird. The colour is a dirty white underneath, and slatish above, gradually changing to black around the head. The tail is bordered with a white band and the head is surmounted by a bright, orange-coloured crown. Thus we see that the bird is a king in every sense of the word, and this is further emphasised by its scientific name—Tyrannus tyrannus. However, it is not held in very high esteem around the apiary, as the toll it levies on the bees rather exceeds its good offices. The nest is usually found in an apple—or hawthorn—tree, as the bird seems to have a marked preference for these. It is a bulky fabric composed of wool, grasses, twigs, plant-fibres, string, or, in fact, almost anything that can be obtained. It is placed generally near the end of a

spreading branch, and usually contains from three to five creamy eggs, marked with reddish brown.

The largest member of the family, which we have, is the crested flycatcher. This bird measures about nine inches from tip to tip, being slightly over half an inch larger than the kingbird. Aside from its size, it may be recognised by its prominent crest and its restless habit of constantly twitching its tail. This characteristic is more or less common to the family, but it is more noticeable in this species than in any of the other members. It generally perches high, and seems constantly on the alert. It will first be noticed about the first of May and we are immediately impressed by its apparently quarrelsome disposition. It seems to be a generally acknowledged fact among the tribe that each piece of woods was intended for only one pair, and, of course, there is usually some forcible argument brought forth before the ownership is decided. It often vents its feelings on the smaller birds, but never attacks the larger ones as does the kingbird. Its general colour is greyish, with a yellowish tint beneath and a brownish tint above. It is usually found in open woods, but may also be frequently seen in deserted orchards. Its nest is an abandoned woodpecker's hole, where it lays from four to six whitish eggs smeared with a reddish brown. It possesses the peculiar habit, which sets it apart from the rest of the bird-world, of placing a cast-off snake-skin in its home. Whether this is for protective purposes, or is merely a whim, we can only conjecture. However, it seems to have been a universal practice ever since the species was known, as the Indians used to place a certain significance on the bird on account of this queer custom. The calls are varied, but the most common is a clear whistle "wit-whit, wit-whit" repeated several times.

There are a few other representatives, but the only ones which we are likely to meet are the least and Acadian varieties. These are the two smallest members we have, being approximately five and a half inches from tip to tip. The least may be distinguished by its slightly-forked tail and its lighter colour. In fact, it is almost white underneath, while the prevailing colour of the Acadian is grey, with a conspicuous olive tint. The former may be found almost anywhere and is a frequent visitor in our city shade-trees. However, the latter seems to have a particular preference for poplars bordering on some stream, and its nest may usually be found there. The call of the least is an abrupt "che-bec, che-bec" repeated at intervals, as it flits about in pursuit of the smaller insects. The notes of the Acadian are the nearest semblance to a song of any of the members, but even then it is merely a confused medley, which cannot be interpreted as anything very musical. The nest of the Acadian is a miniature counterpart of the peewee's, and the eggs are also similar. That of the least is somewhat similar to the phoebe's, but it is placed at varying heights on the outer branches of spreading trees.

Calgary's Evening Schools

T. B. KIDNER
Director of Technical Education, Calgary.

IN the spring of 1911 the Calgary Public School Board was asked by the Trades and Labour Council of the city to establish some evening technical classes on lines which had been suggested by various witnesses who gave evidence when the Dominion Royal Commission held its sittings in Calgary some months before. The school board, always keenly interested in the newer methods of education, as evidenced by the fact that handwork was already taught throughout the lower grades of the elementary schools, and woodwork, cookery and sewing in the upper grades, as well as drawing and music throughout, decided to make a beginning. Accordingly a director was engaged who entered upon his work in the autumn and at once proceeded to make a survey of the field. The hearty co-operation of the trade unions and the employers' associations made this task agreeable, and sufficient data were collected to show that classes in certain lines were definite needs. Especially was it indicated that classes in the building trades were desirable, for in Calgary, as in most Western cities growing rapidly, building is one of the largest industries. The question then arose as to the possibilities for an immediate beginning. No special building was available, every existing school being full. To provide a special building would have meant at least a year's delay, and it was finally decided to use a large assembly hall in a school in the centre of the city and such of the class rooms as were suitable for adult pupils. The assembly hall was equipped as a drafting room with simple trestle tables and a cupboard or two designed to hold drawing boards. A suitable lighting system of adjustable pendants was also installed, and was the most expensive item of the equipment. A prospectus was issued, setting forth the scope of the classes, fees, time-table, etc. The fees were regarded merely as a deposit to show the good faith of the student and were returnable to all who attended regularly on a scale based on the percentage of the students' attendance. The classes offered were building construction, machine drawing, drawing for house carpenters, sheet metal drafting, shop mathematics, workshop arithmetic and practical English. Every help was afforded by the press, and in consequence the classes were practically filled within a week of the opening day.

At the same time that these classes were opened, classes were also formed for the instruction in the English language of the many foreign-

born persons in the city, two teachers being employed and full classes enrolled.

Evening classes in cookery had been carried on for short courses of twelve weeks each the previous winter and this subject was also provided for under the new scheme.

Within three weeks after the opening, more draughting tables had to be installed, for students continued to enrol as the classes became known. In addition, petitions were received from two more trades, plumbers and painter-decorators, for classes to meet their needs. In response to these demands the school board engaged a lecturer in plumbing and sanitation, and organised a course in the theory and science of the trade. For the painter-decorators, a master craftsman was engaged, and a course arranged consisting partly of theory and partly of practice, a room being fitted up in a simple way as a workshop for the latter.

The management of the classes was placed in the hands of a committee of three members of the school board, together with an advisory board composed of employers, representatives of the Trades and Labour Council and other citizens.

Particular care was taken in the selection of teachers, nearly all being chosen because of their practical acquaintance with their subject. In every kind of technical teaching it is eminently to be desired that the instructor should be in daily touch with the commercial side of his subject, and it is a *sine qua non* if success is to be attained and students held in the classes.

The session was continued for about twenty-four weeks and ended with a public meeting and prize distribution, the prizes being donated by several friends of the work.

The total enrolment in the technical classes was 331, and in the classes in English for foreign-born nearly 150.

The autumn of 1912 was marked by considerable extensions of the work and an enlargement of the membership of the advisory board. New subjects of instruction were introduced in the building trades group, namely, heating and ventilation, electrotechnics and applied mechanics, the latter a simplified course of practical science specially arranged for the purpose.

In addition, commercial courses were offered for the first time, shorthand, typewriting, commercial arithmetic and business English being included. For these branches the commercial department of the High School was utilised and a number of students enrolled.

To assist in carrying out this enlarged programme apparatus was loaned by many of the large firms of the city, factories were opened to students for special visits and demonstrations and talks by experts were given in the schools. Arising out of the latter, a regular series of

Saturday Popular Lectures was arranged in the hall of the Public Library, various topics of industrial and scientific interest being included in the series.

Cookery was offered at three different centres in the city, courses of twenty-four lessons being provided.

The classes in English for foreign-born persons increased from two to five groups, each having a large number of students.

The total enrolment in the evening classes during the session of 1912-13 was 1,040, of whom 305 were enrolled in the classes in English for foreign-born.

The close of the session found the school board and the public of Calgary thoroughly convinced of the value of technical education, as far as it had gone, and an important step towards further development was then undertaken in the appointment of a special committee to investigate and report upon an enlarged policy for the future. This committee visited leading cities in the United States and Canada and presented a full report, together with certain recommendations, to the school board on its return. As the recommendations present an outline of Calgary's policy for the future, they are given here in full. With the exception of the one relating to the granting of a month's leave of absence, which was deferred for future consideration, all the recommendations were adopted by the school board. In point of fact, one of the recommendations of the special committee had been anticipated and the Board had already taken preliminary steps towards the establishment of a pre-vocational school, which was opened in January, 1914.

Recommendations from Report of Special Committee

A Scheme for Calgary

As a basis for an enlarged policy of education for industry in Calgary, we beg to submit the following outline of a scheme. While, obviously, some parts of the scheme are not immediately possible, we believe that certain items of it can be entered upon at once, the ultimate scheme being kept well in mind.

Recommendations—High School

1. (*a*) That the present Commercial Course in the High School be developed into a strong vocational course in a well equipped department, with the latest appliances. (*b*) That steps be taken to arrange part-time co-operative courses during the last year or term. (*c*) That an advisory committee of business men be invited to co-operate so as to make (*a*) and (*b*) thoroughly effective.

2. That steps be taken at once to give all students in the High School a measure of industrial work: shopwork for boys and household arts for girls.

3. That the art course be strengthened and related to the Industrial work in a vital and direct way.

Pre-Vocational Courses—That immediate steps be taken to organise pre-vocational courses for boys and girls in some convenient centre. The Fitchburg, Mass., scheme of (*a*) Industrial side; (*b*) Commercial side and (*c*) Household Arts side, appears to us to be a suitable one for Calgary's needs.

Vocational Guidance—1. That a beginning be made in Vocational Guidance in connection with the pre-vocational courses and with the present differentiated High School Courses, through the pre-vocational centre principal and the principals of the various elementary schools.

2. That vocational guidance be taken up systematically by a member of the High School staff, acting as "Counsellor" in the school.

3. That the ultimate aim shall be a complete system of guidance for vocational ends, including employment bureaux as carried out in Edinburgh and being developed in Boston and other American cities.

Vocational High School—1. That steps be taken at once to plan a large modern building with ample facilities for the various branches of secondary education.

2. That generous provision be made in this building for industrial and commercial training by means of (*a*) full courses, (*b*) short courses (vocational), (*c*) part-time continuation courses, (*d*) evening classes.

3. That full provision be also made for academic, scientific and general training.

4. That household arts and science be provided for on a broad scale so as to include (*a*) full general courses, (*b*) shorter vocational courses, (*c*) evening classes.

5. That advisory committees of citizens be appointed for (*a*) commercial subjects (recommended earlier), (*b*) industrial subjects, (*c*) household arts.

General—That a scheme be established whereby the principals of each of our larger schools may be granted a month's leave of absence during the coming year, together with a sum of money towards their expenses, on condition that they each visit some designated city or cities and make a report on some new phase of education upon their return. This would involve the appointment of a relieving principal for one year and the appropriation of, say, $150.00 for each person likely to be granted leave of absence.

. . . . . .

The session of the evening classes for 1913-14 marked a still larger development. Advanced courses were provided in many of the subjects of the previous years and new subjects were introduced. Among the most notable of the new subjects was that of applied art, which attracted a good number of students and has just concluded a most successful season. Millinery and dress-cutting were also introduced and large classes were enrolled. A special course was arranged in industrial chemistry, the needs of workers in the building and allied trades being particularly provided for in the syllabus of lessons. The response was most encouraging, a good number enrolling and continuing throughout the session.

Manual training in woodwork was also offered at three centres, and good classes were carried on in each of them.

In all 1,465 persons were enrolled in the session of 1913-14, 407 of these being in classes for foreign-born. Forty instructors were engaged in the general classes and nine in the teaching of English to foreigners.

A very significant and valuable departure was made by adding four women to the Advisory Board, and it has proved one of the best possible things for the work, especially in household arts.

During the three years in which the evening classes have been in operation much has been learned. Some mistakes have been made and some successes achieved. Most important of all, perhaps, is the spirit of co-operation which has been developed. The school board and its officials, the employers, the workers, the public and the press have all helped in the working out of the scheme, and the future of industrial and technical education in Calgary seems bright indeed.

Suggestion for the Classroom

Busy Work in Writing.—In teaching writing I divide the alphabet into seven groups. Write each group on a card for each pupil. Group 1, "c, o, a, e". Group 2, "i, u, w, v, x". Group 3, "n, m, r, s". Group 4, "t, d". Group 5, "l, b, h, k". Group 6, "j, y, g, q, z". Group 7, "h, f, y". Have these letters (*a*) pricked round with a pin; (*b*) traced with a lead pencil; (*c*) copied on a slate. Vary this by using cards of different colours, but be sure to give the same group until the letters can be formed with some kind of accuracy. Write each child's name on a card and give him this to copy from. Have it kept in his desk to be referred to at any time. Let him change cards with other pupils, and so learn to write names of all the class.—*Miss Gertrude Coughlin in The Educational Review.*

Little Journeys to Rural Schools

F. H. SPINNEY
Principal, Alexandra Public School, Montreal

IX.

IT was Miss Hill's aim to make all the work of her school bear the closest possible relation to the practical affairs of the world—especially to those affairs that appeal most strongly to the interests of children. This policy will in the future be the distinctive mark of the progressive teacher. The ultimate aim of education must be to teach us how to live; and the sooner we begin to take lessons in that long-neglected art, the greater the probabilities of success.

Miss Hill's father, who was a grocer, had supplied her with a "set of scales", which she used periodically in finding the weight of the children. Each pupil kept a record of the weight and age, and noted the increases from time to time. The numbers thus recorded furnished interesting material for examples in arithmetic. It also suggested physical deficiencies, which the teacher was careful to point out to the parents at favourable opportunities.

On the day of my visit the children were being measured as to their height. Two children did the measuring, and the teacher kept the record on the board in the following manner:

Percy Thorne, 3 ft. 11 in.
Joseph Burns, 4 ft. 1 in.
Tom Wilder, 3 ft. 7 in.
Mary Thompson, 3 ft. 8 in.
Etc., etc.

When the measurements were completed the teacher questioned the class orally:

"What is the difference, in inches, between Tom's height and Joseph's? Between Mary's and Percy's?" etc.

All the pupils in the school took part, except the senior "division". The latter were preparing a reading lesson, which we shall consider later on. There were 15 names on the board, with the measurements in feet and inches placed after each name. The next step was to change all the measurements to inches. Then the first measurements were erased, leaving the record in this form:

Percy Thorne, 47 inches.
Joseph Burns, 49 inches.
Etc., etc.

The final step of the lesson was to change the inches back to feet and fractions of feet, thus:

Percy Thorne, 3 11-12 ft.
Etc., etc.

There was no trouble in keeping the pupils "wide awake" in a lesson that appealed so strongly to their individual interests.

Busy work of a similar character was placed on the board, and the teacher gave her attention to the reading lesson with the senior division consisting of nine pupils.

The selections for reading were taken from library books and standard magazines. The choice had been made three days before, with the approval of the teacher, so that the pupils who were to read had sufficient time for thorough preparation. The general understanding was that reading aloud is for the entertainment of the audience, and that it is unfair to attempt such entertainment without the most careful study.

Five pupils read, and then the other pupils were asked to give a brief oral reproduction of four of the selections. Knowing that this exercise was to follow the reading, the latter pupils had listened with the most careful attention. The method of reproduction indicated that there had been much practice in that splendid exercise.

"Do you never use *class readers?*" I asked the teacher.

"Only once or twice a week; then mainly for spelling and word drill."

"I should very much like to see how you conduct a spelling lesson," I added.

Turning to the class, the teacher said:

"Open your readers at page 109. You may look at the first paragraph for two minutes."

When the two minutes had expired, the teacher said:

"Books closed. How many can write the paragraph on the board?"

Three hands were raised.

"You try it, Mary."

Mary wrote the following paragraph, with but one mistake:

> *"Aladdin's mother swooned away with fear; but Alladin snatched the lamp out of her hand, and said boldly, 'I am hungry; bring me something to eat'."*

After the correction of the mistake, the paragraph was erased, and all the pupils except Mary wrote it on slips of paper supplied by the teacher. Mary collected the slips as fast as they were completed, and marked the mistakes. She then named the pupils who had written the paragraph correctly.

This was certainly a great improvement on the general method of "dictation", in which the teacher reads three or four words at a time, and usually has to repeat those words several times for pupils who have acquired habits of inattention. With Miss Hill's method, the pupils wrote all they could remember, and omitted the remainder. It gave an incentive to be awake; it also avoided the usual confusion attending such lessons. The keynote of all her work was: KEEP AWAKE, OR YOU WILL MISS SOMETHING GOOD. The attitude of the average teacher is equivalent to saying: "If you do not give attention the first time, I'll repeat the words as often as you ask." Thus do they inculcate a *most disastrous habit.*

"Do you ever give lists of words to be prepared?" I asked.

"Only when I am teaching some rule of spelling, such as to double the final consonant, etc."

"I suppose the paragraphs assigned are sometimes longer than the one used to-day?"

"Yes, when a home lesson is assigned, the paragraph is sometimes twice as long. Then we frequently take several paragraphs in review. I have tried many different methods, but this one seems the most satisfactory of all. It is also the most interesting to the children. Even the brightest has to put forth his very best effort; that is not always the case with the usual methods."

What a pleasure it is to break away from common routine! Such pleasure comes only as the result of careful thought and preparation, which is the price that we must pay for all the *truly-worth-while things* in life. Every teacher possesses the faculty of enjoying this pleasure in some degree.

Schoolroom Decoration

JEAN HARVEY
Public School, Kinsale

I HAVE been an interested reader of the articles on Schoolroom Decoration published in THE SCHOOL, and thought that other teachers might be interested in knowing how we secured pictures.

In some communities the parents and trustees seem to think that anything is good enough for the school. They never seem to realise that it is in the school that the greater part of a child's life is spent, and that the school should therefore be the most attractive room in the neighbourhood.

It is all very well for them to come probably once or twice a year, to some examination or entertainment, when their attention is taken up with the programme, but let them come for a day or two and sit during the whole school session with nothing more inspiring to look at than bare walls, a few diplomas, or some old coloured pictures, and we would see then whether they retained their ideas on schoolroom decoration.

The walls of our school had been decorated for years with some diplomas and a few coloured prints. The colour combination was awful. During the early part of the term we had discovered a couple of good hardwood frames which had been cast aside as worthless. Glass was secured for them, and by borrowing one and contributing another we got pictures to mount in them. Needless to say, appearances were improved, but not to our entire satisfaction.

Towards Christmas, when we were planning our closing afternoon's entertainment, the subject of funds came up for discussion. We had not hitherto charged anything for admission, but decided to do so on this occasion.

We circulated an announcement that a silver collection would be asked for; and on the day of the concert, I spoke briefly to the parents asking for favourable consideration of our scheme, pointing out some of the defects in the pictures already in use and mentioning some reasons why we should have better ones.

The response was liberal and sufficient for the purchase of two large pictures 22″ x 28″ for framing—"The Mill" and "Landscape Spring" by Ruysdael. We also sent for ten smaller ones 7″ x 9″. These were carefully selected from a catalogue by ten of the oldest pupils, who are passe-partouting them under my guidance.

Fortunately we were saved the expense of framing the large pictures. One of the trustees who is a very skilful carpenter generously offered to make oak frames for us. These are simple in design and very suitable.

Deportment of School Children

GRACE S. LUCKHAM
Public School, Forest

THE aim of education, as I understand it, is to fit the child to take his place as a cultured, manly, useful and capable citizen. In view of this, then, education must be not only mental but moral and physical as well.

At present, I believe we teachers are inclined to adhere too closely to the subject-matter required for examinations to the positive neglect of a training which would be just as useful in practical everyday life. Surely it is more important that a man should know and practise the laws of courtesy and consideration for his fellow-man, than that he know just how many bones there are in his body, just what horrible crimes his ancient ancestors committed, the exact appearance of the ocean floor, or how old Shakespeare was when he died. Certainly it is well for him to know these things, but the question is—Shall we teach these to the exclusion of a more practical knowledge?

I firmly believe if examinations were dispensed with in public schools, the children, in the majority of cases, would receive an education eminently more valuable than the present one. Teachers would then teach a great many things that are now crowded out to meet the demands of the examination-ridden curriculum. But, since we have to contend with examinations let us choose the lesser of the two evils and give the children the advantage of a moral and ethical training, even if it must be at the risk of defection towards examination requirements.

Let us remember that a great many children are so unfortunate as to be deprived of an opportunity of obtaining any knowledge of good manners either by practice or precept, except as it is afforded by the public schools. If the schools neglect this very important part of his training, how lamentably frail are his chances of ever receiving such an education!

Since the habits formed in childhood are the most enduring, a lack of early training in ethics is bound to make itself felt throughout the child's whole life. Surely then, teachers have a responsibility which cannot lightly be laid aside as someone else's duty. May I illustrate just how much a child's early training affects his future by quoting a story which I have frequently read to my pupils.

"A gentleman advertised for a boy and nearly fifty applicants presented themselves. Out of that number he selected one and dismissed the rest. 'I should like to know', said a friend, 'on what ground you

selected that boy, who had not a single recommendation.' 'You are mistaken', said the gentleman, 'he has a great many. He wiped his feet when he came in, and closed the door after him, showing that he was careful. He gave his seat instantly to that lame old man showing that he was thoughtful. He took off his cap when he came in, and answered my questions promptly, showing that he was gentlemanly. He picked up a book which I had purposely placed on the floor, and replaced it on the table; and he waited quietly for his turn instead of pushing and crowding, showing that he was orderly and honourable. When I talked to him I noticed that his clothes were brushed and his hair in order. When he wrote his name I noticed that his finger nails were clean. Don't you call these things letters of recommendation?' All little things in themselves, but each one the mark of a gentleman."

Since the child between the years of two and six is at his most impressionable age, too much importance cannot be attached to the home training during this period. As soon as the child is old enough to talk, he should be taught to say "Please", "Thank You", "Excuse me", "I beg your pardon", etc. In teaching the child these courtesies, the parents and older members of the family should be very careful to use them themselves, for in the child imitation is the dominant characteristic.

There is no more certain mark of the well-bred person than his table manners, and this can be taught nowhere so well as in the home where example should be to the fore. If a child does not receive this training when a child, he will never be entirely free of a certain awkwardness and hesitancy which tells a tale. Besides, there is no better place for the teaching of patience, order, unselfishness, self-control, and consideration for others than right at the table.

Children should be taught to be courteous to strangers and visitors coming to the home. Too often parents make the mistake of keeping their children in the kitchen, playroom, or nursery when company comes, instead of introducing them in proper form and making them feel that they have a part in the entertainment of all guests. Otherwise, when the child is older and must be introduced into society, he is so painfully shy and embarrassed that he is a pleasure neither to himself nor to any one else.

Deportment may be taught in schools either incidentally or by regular definite lessons, or, better still, by a combination of the two. Perhaps the very fact that the subject is deemed sufficiently important to be given a place on the time-table would attach more importance and therefore make it more impressive. Certainly example comes first and foremost in the teaching of any moral or form, but since the schoolroom does not afford an opportunity for the teaching of all manners in this way, there should be a definite instruction along this line. Incidental teaching

is not without its merits. A teacher should never miss an opportunity of correcting a pupil in a breach of good form, for just at that particular time it is most impressive.

Good manners are not like a Sunday garment, which can be put on and taken off at will, and if used as such, will give the same discomfort as a garment made for someone else. Therefore, since the child, after he has reached the age of six, spends three-quarters of his waking hours at school he cannot afford to throw off the cloak of good manners during that time. Where the child has received a good home training, the work of the teacher in this respect will be comparatively easy, and where he has been deprived of this opportunity it becomes more or less of a problem. It should be the fixed habit of both teacher and pupils to be punctual and prompt on all occasions. Some morning when a pupil comes late, the teacher may show what a disturbance the tardy one causes, and thus give the child a motive for striving to be always on time.

It is very important that children should be taught the habits of cleanliness. As a first step in the teaching of this habit, the teacher should dress every morning with great care. The dress should not be elaborate but neat and free from spots and dust, the hair should be neatly, but simply arranged, the teeth carefully brushed and the nails well manicured. Then since children are naturally imitators, they will delight in seeing how careful they can be in regard to them. They should be also urged to keep their desks and the floor about their desks as tidy and free from rubbish as possible. I have found it an effective plan to walk down the aisle at the end of each week and just remark whose desk looked neat and well kept. The next Friday will usually find the careless pupil's desk as neat and tidy as the rest. He does not care to be beaten by his neighbour.

Children should be impressed with the fact that the school is their home for the time being, and that they should take just as much pride in keeping it clean and free from marks and blemishes as their own home. The care of books should not be overlooked. Here example is perhaps the most efficient teacher, and hence the instructor should be careful to hold her book properly, lay it down gently, keep it free from all marks except her name, and never under any circumstances turn the corner of a leaf down to mark the page. Then she may with a free conscience urge the pupils to do likewise.

Calisthenics proves a most valuable aid to correct deportment. Two hours is a long time for children, especially the younger ones, to sit quietly and rivet their attention on books. After a certain time they openly rebel against the monotony and begin to shift about, toy with their pencils, rulers, books, etc., and get into mischief generally. If the teacher will then take time to raise the windows, throw open the doors

and give the ever-pleasing command, "Stop work, please", preparatory to putting the class through an interesting, vigorous and helpful series of exercises, she will be amply repaid for her trouble by seeing the children go back to their work with renewed energy and cheerful countenances.

Respect toward the teacher is essential to the happiness of both teacher and pupils. They should assist her in easy tasks such as cleaning brushes and boards, arranging books and furniture after four, and picking up anything accidentally dropped. On the other hand, the teacher should never fail to say "Please" and "Thank you", when asking or receiving the slightest favour of a pupil, and should show her appreciation of any aid or courtesy rendered. She should encourage the child by never failing to notice any of these courtesies by a smile or an encouraging remark. A teacher may destroy the tendency of a child to lean on desk or table, rest his foot on platform, or toy with books on the desk while in class by requiring class to stand a certain distance from the platform and in a straight line. It is also important to require each pupil to stand squarely on both feet with the shoulders well back and hands, when not in use, at his sides or behind his back. Not only does this improve the standing posture and general poise of the pupil, but it is more conducive to good attention than a careless, free-and-easy position.

Boys should be taught to show deference towards girls as they, when young men, will be called upon to show towards young ladies. In coming to or going from class, I always have the boys step back and let the girls pass ahead of them. They are delighted to show this little deference, and the habit once formed will never be forgotten.

The objection might be raised that a teacher teaching these things would not teach much else, but so many of them may be taught incidentally that it really does not detract from other work, but, on the other hand, aids it by relieving the monotony. Every day fairly bristles with opportunities to improve the manners and conduct of the pupils, and opportunities once lost may never be regained.

I presume most of the teachers of Ontario have among their pupils one or more "Old Country" children, and if so, they will not have failed to notice how mannerly and courteous they are. They are a credit to their teachers and parents, and tell us in language more forcible than words that in the schools and homes of our Motherland, deportment is considered sufficiently important to be given a place in the school curriculum and in the home training. I believe we could not do better than to follow their lead and give this matter due consideration.

First School Teacher—Does Edith's little girl ever make any bright answers?

Second School Teacher—No; she always knows her lessons.—*Judge.*

Library Hints for Modern Language Teachers

[*Continued from April number*]

[For suggested books on Pronunciation and Phonetics and for list of Wall Pictures and Charts see March issue.]

SUPPLEMENTARY TEXTS FOR FORMS I, II, III—(*Continued*)

French.

Little French Classics, bound in cloth, Blackie and Sons, London and Glasgow. 4d. each.
Töpfer: Le Lac de Gers.
Dumas: Jacomo ou le Brigand.
Daudet: Le Petit Chose à Paris.
Erckmann-Chatrian: Contes Fantastiques.
Mérimée: Le Coup de Pistolet.
Dumas: Le Voyage de Chicot.

Beginners' French Texts, a series of little books at 7d. each; also Elementary Texts at 9d. each. Rivington's Limited, Covent Garden, London.

Each of these series contains a great number of suitable books for beginners, those mentioned being merely intended as suggestions.

German:

Guerber: Märchen und Erzählungen, Part I, Heath and Company, Boston. 60c. The very best book for beginners. Can be used as a reader after the first six weeks' study of the language.

Spyri: Rosenresli, George G. Harrap and Co., London. 1s. A simple little story; with all new words tabulated on each page, for the study of the pupil.

Rippman: Der Goldene Vogel and other stories. J. M. Dent and Sons, London and Toronto, 35c.

Blackie's German Texts. Blackie and Son, London and Glasgow, publish a cheap series bound in cloth at 6d. each. About 30 in the series.
Grimm: Die zwei Brüder.
Hauff: Märchen.
Zschokke: Der Zerbrochene Krug.
Seidel: Der Unsichtbare.

Ford: Elementary German for Sight Translation, Ginn and Company Boston. 25c. A very good collection of well-graded passages.

LIFE, MANNERS AND CUSTOMS

French:

Roberts: Features of French Life, Parts I and II. J. M. Dent and Sons, London and Toronto. 25c. each. Two easy French readers containing much useful and interesting information.

Batchelor: Trois Semaines en France, Oxford University Press, London and Toronto. 50c.

Duhamel: Tony et sa Sœur en France. J. M. Dent and Sons, London and Toronto. 75c. An exceedingly well-written book, which is a veritable storehouse of information about the French life of to-day.

Kron: French Daily Life, J. M. Dent and Sons, London and Toronto. 75c. A complete guide for the student and traveller, but somewhat advanced.

German:

Mosher: Willkommen in Deutschland, Oxford University Press, London and Toronto. 60c.

Holzwarth: Gruss aus Deutschland, Heath and Company, Boston. 90c. A student's experiences in Germany. Well illustrated.

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W. C. F.

Suggestion for the Class-room

Compositions.—After the work of planting bulbs has been done, a careful discussion of the whole subject will help to organise the pupil's knowledge, and give the best possible motive for the expression of thought. As the class discussion proceeds, points like the following may be written upon the blackboard to serve as an outline for a written lesson:

1. Where we got our bulbs.
2. How we planted them.
3. The care they need.
4. What we expect from them.

Using such topics as a guide the pupils will gradually strengthen the power to think clearly, and to write their thoughts in orderly fashion, which includes the making of paragraphs.—*The School News and Practical Educator.*

School Sports

A. W. BURT, B.A.
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AMONG the names most splendid on England's roll of fame is that of the man whose death moved Tennyson to call him the "last great English man." We may be sure of this great soldier that in youth he displayed the same qualities on the school playground as those which in manhood made him renowned upon the battlefield. He was certainly a lover of play, for a man does not become sportive late in life, and one of his biographers records that "sublime in his simplicity as the greatest only are," he might in his old age be seen engaged in childish games with his grand-children, quite unembarrassed in the presence of spectators. He was, moreover, not one to make statements unwarranted by his knowledge, so when he says that the battles of England were won on the playgrounds of her schools, he no doubt spoke from personal experience of the benefits of good clean sport. There is no need to dwell upon these benefits, but it may not be amiss to summarise them: the development of physical strength and agility, and of mental alertness and quickness of decision in emergencies; and the cultivation of the virtues of courage, endurance, persistency, self-control, of patience and good humour in adversity, and of temperance and modesty in triumph.

All games in their measure serve for the attainment of these benefits, but, from the educational standpoint, the best of sports is Rugby football; and it was no doubt to this game the great Duke referred when he compared the campus to the battle ground. Rugby football is, however, more than a training school for war; it is a training for life, of which it is an epitome with its more or less ineffective struggles to gain successive goals, despite the direct opposition, the checks, and the various devices of opposing forces. The very divisions of the game suggest the periods of the life of man. The first quarter, with its fervor of buoyant anticipations, and its abounding physical vigor; the second, with its realisation of the sternness of the strife and of the need for husbanding energies that begin to feel the strain. Then comes the turning point, half-time, when the player girds himself to further struggles with a consciousness of waning physical strength, and, though still full of hope and determination, when he begins to feel the weariness of the strenuous effort and to look forward to repose. Then the last quarter begins when with body more or less exhausted, but, if he plays the game worthily, with courage unabated, he struggles on stubbornly to maintain his

advantages or to regain his losses, and drags out the contest to its close. Then, applauded as victor, or unregarded as vanquished, he wins a rest to which the previous toil gives compensating sweetness.

There is too, another, and from the pedagogic standpoint, a still more important analogy between a game of football and the game of life; namely, that while we naturally and healthfully strive to win, it does not really matter whether we win or lose if we only play the game. The cups and pennants which are the prizes gratify the pride or puff the vanity of the victor, but the real gain is in at least equally great measure the portion of the defeated; for the truth cannot be too strongly emphasised that it is not the temporary accidents of wealth and power that have real worth, but the abiding and indestructible additions to manhood that accrue from effort honestly and faithfully directed. Indeed, the palm wreath does not always crown the brows even of the most capable and strong, for the factor we call luck—the aroma of the exhilarating wine of competition—has much to do with the issue of every contest.

Again, associated with the contests of sport as with those of life, there are many evils, the fundamental cause of which is the desire to get the gain without paying its price in honest effort—to win without playing the game. The besetting ills of sport in this country are professionalism and what are called "fans", and the worst symptoms are introducing "ringers," "fixing" games and betting.

Professionalism is perhaps a greater evil than are the fans. When the old Romans turned the games of the arena into exhibitions of the strength, courage and ferocity of hired gladiators—usually foreigners—sports degenerated into scenes of carnage, and the sun of national glory speedily set. So, when any sport is professionalised, its own decadence and the degeneracy of its votaries are alike certain. Witness the fate of lacrosse, our distinctively Canadian game, the most attractive of all games, perhaps, to spectators. Baseball, inherently excellent, though corrupted by many accessories that are vulgar and degrading, has already sunk to the stage where public interest in amateurs is dead, so that in places in which professional teams are maintained playing the game is neglected by all but the small boys who are not yet discouraged by lack of popular sympathy. We already too import nearly all our players, so that we Canadians are ceasing to be participators and are becoming satisfied with the passive role of mere spectators, and are thus excluded from all the benefits of the sport and exposed to the dangers attendant upon inactivity. Rugby football, with no recognised professionalism, is the only amateur sport that draws large crowds in Canada; and even there, if we must give any credit to the rumors that are current concerning the way in which professional coaches—of the American baseball type—have been strengthening their teams, corruption also has set in.

The office of the teacher is not uncommonly supposed to begin and end with the mental training of his pupils. Indeed, mental "training" is too lofty a phrase to designate a prevailing idea that his task is—not even to develop power of thought and love of learning—but merely to urge or terrorise those under his charge into that travesty of scholarship which consists in stuffing memory till the surfeit is unloaded at examination time. The true view of his calling, however, recognises that its object is not merely to make scholars—even real scholars—but to be a co-worker with God in developing men, men of cultivated powers of body, intelligence and feeling. To accomplish this we must broaden our conception of the humanities—the agencies for smothering the bestial in us, and kindling the nobly human—and, like the Greeks of old whose philosophy and literature have done so much to humanise us, must make them include athletic sports, not merely gymnastics, calisthenics, and even what are called track athletics, though the latter do have the interest of competition—but above all, these exercises vitalised in games. The teacher whose vision is not dimmed by pedagogic myopia when he takes stock of the results of his work, will, though he recognises the comparative failure of any one-sided development, see on the whole a fuller accomplishment in the various pursuits of life achieved by those of his old pupils who devoted themselves to athletics to the neglect of study, than from those who devoted themselves to study to the neglect of athletics. Hence he will set a high value upon wholesome sport and will do all in his power to encourage it and to free it from influences that tend to its demoralisation.

The day was warm, the children restless, the teacher impatient. One curly-haired boy was moving his jaws faster with chewing gum than his brain had ever been known to work. His feet were in the aisle. A smile was on the face of more than one pupil when the teacher said:

"Take that gum out of your mouth and put your feet in."—*New York Globe.*

First Aid to the Teacher.—Little Tommy had spent his first day at school.

"What did you learn?" he was asked on his return home.

"Didn't learn nothin'."

"Well, what did you do?"

"Didn't do nothin'! A woman wanted to know how to spell 'cat', and I told her."

The Class Paper

R. K. HALL
Jesse Ketchum School, Toronto

POSSIBLY there is no other subject in the Public School curriculum that gives the teacher—more particularly the senior teacher—greater worry than composition. Undeniably, it is one of the most important studies and goes hand in hand with grammar and even literature. Yet there is a vagueness of limit, a broad vista of possibility, and an indefiniteness of beginning and end about it that harass sorely, if they do not actually discourage.

Broadly speaking, I think the chief aim of composition should be to give the pupil—or, more correctly speaking, to help the pupil to gain —facility, clearness, and accuracy in the use of his own language. This, of course, includes punctuation, spelling, and all the minor details. I need not recapitulate the host of devices employed, all of which tend to achieve that end. The one fact that I do wish to impress is that most pupils view essay-writing with dislike and that very rarely does the average teacher obtain the best efforts of his pupils.

Naturally, there is a reason for this. The commonest, perhaps, is that the class have been given subjects which are beyond their experience and knowledge or outside the pale of their interests. But even if that is not the case, the pupil ordinarily gives but apathetic attention to the matter for the simple reason that he is aware that only the teacher's eyes will ever see his production. There is not the least incentive to good work because, after all, high marks, in themselves, do not appeal to most boys and girls; it is the admiration of their fellow-pupils that they crave.

About a year ago I suggested the publication of a weekly paper to my class with the purpose of overcoming this lack of incentive. It was a Senior Fourth class in a city school, and as most of them would never go beyond the Public School, I felt the necessity of sending them forth as well equipped as possible. They adopted the proposal with enthusiasm. Although they came from ordinary, middle-class homes at best and, so far as the boys at least were concerned, earned their own pocket-money, they bettered my plan later by volunteering to subscribe ten cents each every week in order to have a type-written copy for every member of the class. One of the boys, acting on his own initiative, had ascertained that a Business College would do the work for that amount.

The entire management was left to the class with the exception of the appointment of the editorial staff. The latter I selected myself,

choosing those boys and girls who had done the best work in composition during the month. Everything pertaining to the preparation of the paper was done outside of school hours and all contributions were voluntary.

Four rules were rigidly enforced: (1.) Only original contributions should be accepted; (2.) The punctuation and spelling must be faultless; (3.) The most interesting matter should always secure preference; (4) The editorial staff should be appointed monthly and should consist of those who stood highest in composition during the month.

The whole class participated in the selection of departments for the paper. The following were decided upon eventually: (1.) A short poem by some standard poet; (2.) From Teacher to Class; (3.) School News; (4.) World News; (5.) School Athletics; (6.) Best Essay of the Week; (7.) Information Column; (8) Correspondence from Neighbouring Schools; (9). Lettuce Laugh. The paper was named "The Ketchum Courier", thus making it distinctive by incorporating the name of the school.

From the very first issue it was successful. From a two-page paper it grew until every issue had five large pages. Every pupil in the room handed in more carefully-written compositions than I had ever received before. True, many of them were far from perfect, but so great was the immediate improvement that I was delighted. Personally, I never corrected or revised a single item; everything was either accepted as it was or rejected and my share in either case was merely that of a general supervisor. And, taken all in all, it has proved itself the best method of drawing out the full powers of the pupils and of giving them a definite aim in their work. As a celebrated English litterateur once remarked, "'Tis sweet to see oneself in print", and this, I think, applies as much to pupils as to older persons.

The Ketchum Courier was the first school paper published in the Public Schools of Toronto. Within three months of its inception there were two others, both of which were equally successful. One of these, The Huron Herald, sent a page of correspondence to its forerunner quite regularly. This, too, always showed indubitable signs of careful preparation and never required any revision.

I wish my readers could inspect a few copies of this class paper and judge for themselves of its efficacy. I have sent many copies to my teacher friends and all were surprised at the excellence of style and matter. Some few refused to believe that it was the unassisted work of Entrance pupils.

Of course, I quite realise that every class may not be able to supply each member with a type-written copy. But a single neatly-written paper which may be read to the class either by teacher or pupil will be

found to perform almost equal service. However, I would urge the adoption of the more expensive course if it is at all possible. It will be found that it will lend a certain responsibility, a fine independence, and a noticeable class unity if its members can manage a thing of that sort successfully. Besides, there is a finish, a novelty—call it a romantic element if you will—about the typed sheet that enthralls the pupils. All my boys and girls prized their copies highly and saved them. The demand for copies from other rooms was quite large and by means of these outside subscriptions the undertaking was kept on a sound financial basis. This also enabled the staff to give papers to the six or seven members of the class who were unable to subscribe the necessary amount every week.

Probably the most pleasing feature was the interest of the parents. All were delighted with this tangible evidence of their sons' and daughters' progress.

In conclusion, permit me to present a summary of the benefits to be derived from the publication of a class paper: (1.) Essay-writing becomes a pleasure rather than a disagreeable duty; (2.) It helps the pupil to realise his full capabilities; (3.) Since the range of topics is practically illimitable, the pupil cannot urge lack of knowledge of any particular subject as an excuse for not writing anything; (4.) It brings neatness and accuracy into the composition work; (5.) As the pupils write largely of current happenings in and about the school, they learn unconsciously to visualise before writing, hence clearness follows naturally; (6.) Pupils usually like to keep the copies of their paper. These constitute a fine diary of school events and in later years will revive a fund of pleasant memories.

The Man She Heard About.—"There was one man whose life was perfect," said the Sunday-school teacher. "Which one of you can tell me who he was?"

Little Mary Jane's hand went up, and the teacher nodded to her.

"He was mamma's first husband," she said.

Peace at Any Price.—"What's the shape of the earth?" asked the teacher, calling suddenly upon Willie.

"Round."

"How do you know it's round?"

"All right," said Willie; "it's square then. I don't want to start any argument about it."

The School Garden as a Factor in Education

A. J. KAUFMANN
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THE school garden, like every other innovation in this intensely practical and money-loving age, must first run the gauntlet of "Will it pay?" "Will it pay?" asks the school trustee, "Will it pay?" echoes the rate-payer, and last of all, "Will it pay?" reiterates the teacher, though the last query does not bear entirely on the financial aspect of the proposition. These first two questions are easily answered in the affirmative. The Government pays the bulk of the initial cost of establishing a garden and thirty dollars a year for maintenance after it is started. Besides it gives a grant of thirty dollars a year to a teacher who has a certificate in Elementary Agriculture and Horticulture, thereby enabling the section to get a better teacher for the salary they offer. Thus it pays as far as the trustees and rate-payers are concerned. From the teacher's view-point the question is, however, not so readily answered.

The aim of the school is to educate, that is, to draw out or develop the pupils so as to make them more useful citizens. How can that be better accomplished than by teaching the things in which they are at present interested and which will some day be their occupation in life? Let us look for a minute at the knowledge a child receives from the garden. In spring he learns how to prepare the ground properly and how to plant the seed. Later in the season a comparison of the beds that have been carefully worked with those that have been hurriedly cultivated brings home to him the value of careful and thorough cultivation in such a way that he is not likely to forget it and will certainly be the better for it when he becomes the possessor of his own farm. This is only one point in farming that the school garden teaches. Dozens of other illustrations could be given. Thus the child learns many things that are of direct value to him in his everyday life. Who will say that they are not more useful in developing his mental capacity than the memorising of pages of dry, uninteresting facts about Europe or some other continent?

The practical knowledge imparted is by no means the greatest value of the school garden. It is only one factor in bringing about much greater results. The cry of every one, farmers as well as town dwellers, is that the young men are migrating to the cities. Nor is this to be wondered

at. The whole public school education tends towards that result. The child learns about everything except that which he can apply in ordinary farm occupations, and as a result there springs up in the minds of many boys the idea that farming is an inferior occupation. It follows quite naturally that the boy seeks the city where he can apply directly what he has learned. The teaching of agriculture in the schools gives farming a sort of dignity in the eyes of a boy, and by leading him on and showing him the many problems of farming his eyes become opened to the fact that farming is not a drudgery but a science, and not only a science but the highest of sciences. Then, too, by interesting the boy in a few such simple experiments as may be conducted in a school garden, he is led to conduct other experiments for himself and becomes more interested in farm operations. Will not the presentation of farming in such a new light show even the most ambitious youth that there is ample scope for his mental activities, and do something towards preventing the depletion of the farm and the overcrowding of the cities?

No matter what walk of life the pupil may eventually enter, the school garden will always form an important factor in his education. Its influence is physical, mental, moral and aesthetic. The physical effects are perhaps not so noticeable in normal healthy children who will always receive plenty of fresh air and exercise in their games. But in the case of children who are lame or otherwise physically defective and cannot take part in the games of their comrades, is there anything more beneficial than taking care of a garden plot where the work is not too strenuous and yet takes them into the fresh air and sunshine?

But while the physical effects are important the moral benefits can scarcely be over-estimated. By giving the pupils a plot of their "very own" they get a feeling of pride in their flowers and vegetables. By the pride which they take in their own beds they are led to respect the property of others. A child that does not wish to have his own garden damaged will not injure that of another. The child also gets a higher opinion of his own importance from working a garden and making a success of it. He gets more self-confidence and is led to put forth greater efforts in doing other things.

In regard to the aesthetic value. By actually planting, tending and caring for a garden of his own a child takes a keener interest in the beauty of his flowers than any amount of surveying the flowers of others could bring about. What is more, the child learns how easy it is to make a home attractive by a few beds of flowers and shrubs, and he is almost certain to beautify his own home when he becomes the possessor of one.

So much for the value of the garden in itself. Now let us consider it as a supplement to other school subjects. Almost all children are interested in gardening, and by careful management the skilful teacher can

extend that interest to almost every subject on the curriculum, especially composition, arithmetic and art. Perhaps as an aid to composition it ranks first. It supplies an almost unlimited number of subjects, and subjects that can be adapted to the capabilities of the child in any grade. Then the theme is familiar to the pupils and the results will be better than with many other themes on which he is asked to write. What is more, a child who has written a good composition on "How I Prepared my Garden", will not be quite so easily satisfied with his production in other subjects.

Suggestions for the Class-room

The Make-up of the Teacher.—In the primary grades at least, the teacher must be the source of inspiration of her class. Nine-tenths of their interest in school is borrowed interest, and it is well that this is so. She should have a perspective broad enough and accurate enough to see the aim and purpose of her work. With this there should be system and enthusiasm enough in presenting it and personality enough about her to make the pupils want to please and work for her.—Thos. E. Sanders in *Primary Plans.*

Mathematical Formula.—A city superintendent in Kansas told us this true story: I went into one of the rooms to inspect the work. Mental arithmetic was the order of the hour. I gave the class this test problem: If one boy gets up at six o'clock in the morning, when will two boys get up? "If," said the boy who was chosen to recite, "one boy gets up at six o'clock, two boys will get up at two times six, which is twelve o'clock." Which shows that the formula may sometimes swallow several things. John MacDonald in *Primary Plans.*

Wrong Use of Busy Work.—Keeping children at work is about the hardest task that is set the teacher to do. Hence, a great many devices, mechanical in their nature, used by teachers in the school-room, while accomplishing the result sought for, at the same time lead to indifference and often stupidity. Much of the work placed upon the blackboard for the pupil is of this nature. There are problems, not generally easy, to be performed; dictation exercises to be copied, geography and history questions to be answered—all these not for the purpose of training the child, but to keep him busy. This motive may be excusable in the young teacher not having her class quite under control, but for the teacher of many years to thus narrow and harden the mental processes is an unpardonable crime. The school-room is for work, but the work should be engaged in cheerfully and eagerly.—*Primary Plans.*

Mutual Questioning by Pupils in Class

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FOR arousing and intensifying interest both in class exercises and in seat-work it is doubtful if there is any other means so generally effective as the systematic questioning of pupils by one another after the manner about to be described. It is an old method, but is not so well known as it should be. The present writer first came under its beneficial influence when a pupil in a public school many years ago, and afterwards employed it to advantage as a teacher in public schools. It is true that the method appeals to the instinct of emulation, and calls for going up and down in class, but to make a moderate and guarded use of this instinct is not a practice to be hastily despised.

The method may be employed for one or more rounds of questions in any lesson after the teacher has done his work of developing or what not, or for the extra exercise during a review.

In preparation the children make up their own questions individually at the seats, or at home, and, if necessary, write them on slips of paper. The number of questions prepared by each pupil should be somewhat in excess of the number likely to be required in the time allotted for the exercise, so as to allow each pupil a chance to avoid repeating a question that has been previously answered.

When the class is called up, the pupils take their position in any order, or in an order determined by previous work. Suppose the class to consist of five pupils, A, B, C, D, E, in the order indicated, the pupil A being at the head. To the pupils B, C, D, E, the immediate purpose of the exercise is, of course, to obtain a higher standing, and A's purpose is to hold his position. The teacher acts as chairman.

The procedure is as follows: E gives one of his questions to the rest of the class. He must speak it with sufficient distinctness to be heard to the head of the class, and speak it once only. Every pupil who knows the answer holds out his hand. Suppose that C holds out his hand, but D does not. After waiting a sufficient interval to give D a fair chance to think out an answer, E moves up and stands in front of D until C gives his answer. If this answer is correct, E steps in below C, and above D. The order of pupils is now, A, B, C, E, D. D now asks a question. After an interval for thinking, if necessary, E answers correctly and D remains at the foot. It is C's turn now to ask. Suppose that both B

and A fail to answer, then C moves to the head place and answers the question himself. Suppose that in the judgment of the teacher, C fails to answer his own question correctly, he must then go down, not merely to his former position, but quite to the foot of the class. Or suppose that C accepts a wrong answer from B or A, he must also go to the foot. The reason for these measures will be explained later. The order is now, A, B, E, D, C, It is now B's turn to question, and if A can answer, B remains where he was. In this case A does not ask a question, since there is no one above him to answer. But if A fails to answer, B goes above him, and A has a chance to question him. The questioning has now gone once around the class, and the exercise may be continued for as many rounds as the time will allow.

It will be seen that this method requires that every one shall be prepared to ask questions, and probably gives every one a chance to ask them. The chief excellence of the method is that pupils in their desire to "get up" will naturally ask questions on the matters that they themselves consider the most difficult, which are, of course, the very matters which the teacher wishes them to study. And in order to avoid the risk of humiliation involved in being required to "go foot", pupils will usually see to it that they know how to answer their own questions.

Some details may be added. No pupil is allowed to look on his paper except at the time he is actually asking his question. He must not look on either while another person is answering his question or he is answering it himself, or while another pupil is asking his own question. The teacher is the final judge as to whether or not the question is a fair one or the answer correct.

The method is applicable in some form or another, in most of the public school subjects, from the Third Grade up. Thus, in Grammar it may be used in parsing or analysis, and in correcting errors, and giving reasons, or in stating definitions that have been fully developed. In Arithmetic it may be used for tables, mental problems and such rules or definitions as it may be advisable to learn. In Literature the questions, may call for explanations of terms or phrases, the description of a scene or character, the outline of a plot, the relation of a condition, an act, or a quality of character to the working out of a plot, or the reciting correctly of a stanza or longer passage. In History and Physiology, the questions may call for a knowledge of single facts, or a quite long series of facts. And so on with other subjects.

"Now, Harry," asked the Sunday-school teacher, "what must we do before our sins can be forgiven?"

"That's easy," replied Harry. "We must sin."

Canadian Artists Series

V.

"My purpose as an artist is not to strive even to cross swords with the great artists, so much as to paint for the home and to endeavour to tell something of the joy I take in seeing beauty in the common things of life."

—*F. M. Bell-Smith.*

MR. F. M. BELL-SMITH is one of the best known and most popular of our Canadian artists. His pictures have had a world-wide sale and are admired in many lands.

His career as an artist has been long and varied. He had already won fame as a marine artist before removing to Canada in 1867. It was his delight as a boy to make rapid sketches of scenes in the streets of the great metropolis. To this boyish pastime he owes his remarkable facility in recording the salient points in the numerous street scenes he has given us.

In Montreal in 1867 was founded the first society of artists in Canada, known as the Society of Canadian Artists. John Bell-Smith, a skilful portrait painter, was first president, and his son, F. M. Bell-Smith, one of the members. Of the original thirteen who organised the society, Mr. Bell-Smith is the last surviving member. In 1886 he was elected to the Royal Canadian Academy. He is represented in the National Gallery at Ottawa by three paintings: "White Head", "Mists and Glaciers of the Selkirks", and "The Landing of the Blenheim".

The student of Mr. Bell-Smith's works will be struck with three outstanding characteristics, his success in recording the changes which come over the face of nature dependent upon atmospheric conditions, his skill in suggesting, while repressing, details and his remarkable versatility. The fogs of London, the bright skies and clearly defined peaks of the Rockies, objects seen through evening shades or dripping skies or bright sunshine, all receive sympathetic treatment at his hands. The two half-tones reproduced in this issue illustrate this atmospheric quality. The frontispiece, "October on the Fraser River", is one of his best Canadian paintings. The setting sun slants his beams along one side of the turbulent, rock-bound river, lighting up the large Siwash rock in front of the foaming exit of the Siwash creek, while the opposite crags are wrapped in purple shades. High up on an almost inaccessible rocky platform, the lonely Indian fisherman has erected a crude scaffold upon which to dry his fish. "The Canyon of the Fraser", exhibited at the World's Fair, St. Louis, at the Walker Galleries, Liverpool, and exten-

sively in Canada, shows a similar skill of faithful portraiture of nature set in grandeur. "The Silvery Tide" was recently shown at the exhibition held by the Ontario Society of Artists. In the middle distance is seen Waterloo Bridge, made famous as the Bridge of Sighs, by the poet, Thomas Hood. In the foreground the turbid tiver is silvered over by the reflection of the gray skies above, and thus suggests the name.

Another notable river scene by Mr. Bell-Smith is "The Bird of Prey", a nocturne of Old London. The artist is known as an ardent admirer of Dickens, who has supplied him with the theme. The distant city stands out but dimly amid the darkening autumn evening. The murky

"The Silvery Tide"

river moves with majestic sweep under the influence of the strong outgoing tide. In the foreground Gaffer Hexam leans over the stern of his boat, busy with his gruesome tow, while his daughter, Lizzie, with a horror-stricken, averted face, plies the oars.

Perhaps the most popular of Mr. Bell-Smith's paintings is "Lights of the City Streets", owned by the Robert Simpson Company, and on exhibition in their departmental store. The kaleidoscope of city streets requires a quick eye and a facile brush to note and fix "the one brief moment caught from fleeting time". And both are pre-eminently characteristic of our artist. The place is the corner of King and Yonge Streets, Toronto; the time, twenty years ago at the rush hour on a wet evening.

The movement of busy newsboys, hurrying pedestrians, alert corner policeman and swinging street cars is splendidly portrayed. The spire of St. James' Cathedral stands ghostlike in the fog and the distance. But it is the gleam from the street car head-light and office windows through the fog and upon wet pavements which catches and holds the attention.

Space forbids extended reference to the wide range of his art. His numerous street and river scenes attest a fondness for those busy spots where the tragedies and comedies of human life are hourly performed. But the majesty and loneliness of mountain and sea have been as sympathetically viewed and as truthfully portrayed. We must not close without a brief reference to the historical paintings, sometimes called the Sir John Thompson funeral series, consisting of three masterpieces. In the first, "Queen Victoria's Tribute to Canada", the queen is represented as placing a wreath upon the bier of the Canadian statesman. The queen gave the artist a special sitting for this picture. The subject and the masterful treatment should have given it a place in the National Gallery long ago. "The Landing of the Blenheim at Halifax" represents the arrival of the British cruiser with the remains of Sir John Thompson. "The State Funeral in St. Mary's Cathedral, Halifax" will be of increasing historical interest because of the number of portraits of celebrated persons which it contains.

S. W. P.

From the Little Red Schoolhouse

These are some miscellaneous answers taken from recent examination papers:

Queen Elizabeth was one of the early English queens, who lived until she died. A good many of the others were murdered.

A foreigner has to be a native of America before he can vote.

Animals that live both on land and in water are called Ambiguous.

A synonym is a word which expresses what you mean, and an antonym is one that expresses what you don't mean.

Malicious is something pertaining to the militia.

An oasis is one of those places where any one can get a drink.

The Young Idea Relieves Itself Again

Nothing is something which cannot be felt nor heard and you cannot see it when you are looking at it.

Domestic Science includes cooking, working and physical torture.

A Buttress is a female goat.

A straight line is one which always runs in the same direction unless it is bent.

Joan of Arc was Noah's wife. —Nettie Rand Miller.

Methods of Teaching Primary Reading

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Faculty of Education, University of Toronto

V. Concentration Method.

1. *History.* In our study of the alphabetic, phonic, phonetic, word and sentence methods we observed that they present a more or less *logical* course of development—a development which resulted from the endeavour of one method to cure some outstanding defect in the other. Though the concentration method strikes at the great defect which lies at the very core of all these methods, nevertheless it can scarcely be looked upon as a *logical* outgrowth of them. It is *psychological* rather than *logical* in its origin. It is unquestionably a scion of the Herbartian psychology. It is a part of the more comprehensive movement to revitalise and reorganise both the content and method of the whole course of study according to the fundamental Herbartian principles of apperception and interest.

Perhaps its two most able exponents are: Francis Parker, Talks on Pedagogics, published 1894; and Mary E. Laing, Reading, A Manual for Teachers, published 1908. It is wholly impossible to give an adequate treatment of such a method in the compass of one brief article. Hence my hope is that primary teachers may make an intensive study of the above books for themselves.

2. *General Position.* The concentration method presents a complete right-about-face in its fundamental assumption. The assumption or hypothesis upon which the first five methods are based is that the *word forms must be first learned by themselves* before they can be used to awaken in consciousness those ideas which we have more or less conventionally assigned to them; whereas the assumption which underlies the concentration method is that by all means the best time to present and fix these word-forms is at that moment when the appropriate ideas are in undisputed possession of the attention. Thus, the general position taken by the advocates of the concentration method is very similar to that outlined in the article on "The Reading Process" in the October number of THE SCHOOL. They agree that words, like window panes, are things to look through, not things to look at; that the process of reading—par excellence—is that of grasping the thought; that the initial difficulty and obstacle in word-recognition is best solved and overcome by presenting the written or printed word at that moment when the thoughts are most interesting and thus most compelling to the attention.

The chain of rather patent and indisputable facts by which they arrive at the above conclusion may be briefly summarised as follows: (1) Words act upon consciousness in precisely the same manner and by exactly the same laws as do all other objects. (2) The whole function of words is to awaken in consciousness those appropriate ideas which we have conventionally assigned to them and which we thus expect them to recall. (3) Since the attention is directed towards the grasping of the thought-content the word-forms must act instantaneously, i.e., they should not in any way absorb the attention. (4) Hence there must be the closest association between the written or printed word and its corresponding or appropriate idea in order that this instantaneous reaction of word upon idea may be set up. (5) Whatever assists in bringing about this close association may be used in teaching reading, whatever does not should be omitted. (6) The ideal method of teaching primary (or any other) reading can be reached only by a complete application of the law under which such associations are set up or instituted.

To give a comprehensive and intelligible treatment of how these associations are set up would lead one into the theories of apperception, interest and attention held by the advocates of the method. The length of this article absolutely forbids such treatment. So, again, at the cost of rendering the present article more or less unintelligible, I shall content myself with a mere summary of their conclusions.

(1) Clear perception depends upon the degree of attention, i.e., in whatever field the mind is active the clearness of the resulting images will be measured by the quality of attention given.

(2) Degree of attention depends upon the quality of interest.

(3) The highest form of attention results from spontaneous interest.

(4) Spontaneous interest centres in content, never in form.

(5) Children are most interested in humanity and its activities, and in nature, especially where nature exhibits life and movement. This brings us back to their original assumption or hypothesis, viz., the best time to present these word-forms in order that the association between the word-form and its appropriate idea may be instantaneous and lasting is at the moment when these interesting ideas are in undisputed possession of attention. "If a child, acting under the energy aroused by appropriate ideas through the investigation of subjects which arouse pleasant emotions, can learn the word immediately on its presentation, and can reproduce that word rapidly upon the blackboard, then the question of method is settled." Of course this is exactly what they claim can be accomplished.

3. *Steps of Lesson Procedure.*

"We will suppose, then, that he has lessons, experiments, observations and investigations in all the central subjects; that they form the

core of the work done by the teacher; that the child's mind, his whole being, is brought face to face with the truth—the intrinsic knowledge—and consequently with intrinsic thought; and that at the moment when the word is required it is given orally, and at once written rapidly in a plain, beautiful hand upon the blackboard. I am now speaking from considerable experience. The child is interested in the appropriate activities; they have been aroused in his mind, they have become intense, and just at the right moment the word from the blackboard acts upon consciousness, is associated with the appropriate activities, and one act of association is sufficient for the functioning of the word. Not only are the words presented, but sentences showing what the child has discovered in experiment and investigation are also there."—Francis Parker, "Talks on Pedagogics."

Merits. (1) The law of concentration or law of attention lies basal to all education. It is the condition under which this or any other method is valuable.

(2) Time is spent on the study of the natural sciences, geography, history, literature, myths, and the other central subjects, whereas reading is learned incidentally and unconsciously.

(3) The great benefit of the concentration is that a child will never fancy he is reading unless he grasps the thought aroused by the words.

Suggestion for the Class-room

Reading.—Busy work in reading is given to children just beginning school. Perhaps the first work given would be word building from letters. The words will be built by pupil and teacher, before being built by the pupil himself.

Each child is given an envelope containing bits of cardboard, each bearing a printed letter. Next he is given a hen cut out of cardboard, or a dog, or a cat, or a fish, the form depending on the word which has just been taught, and which you will build. We select a fish. On each side print "f-i-s-h". The teacher using a large pattern traces a fish on the board. Pointing to "f", ask, "Who can find a card with this on it"? Lay that letter near the fish on your slate. Now who can find "i"? "s"? "h"? Place each in turn near the last one put up. Do this at least three times. Have the word erased, and make believe their slate is a pond. Fill the pond with fish.

Each new word in Part 1 of the Primer will furnish busy work, and after helping with two or three words the class will readily build any word. The make-believe games play a very important part in Grade I, so that the slate may be a trap to catch rats, a nest to hold eggs, a pen for pigs, a barn for cows. —*Miss Gertrude Coughlin in The Educational Review.*

Current Events

The Home Rule Bill.—In the struggle now being waged in the British Parliament over the Home Rule Bill, crisis succeeds crisis until our capacity for excitement is in danger of exhaustion. The school-boy who is wont to recite glibly and conclusively the circumstances and influences that led to this or that political or social upheaval in the distant past, and the rights and wrongs of the case, would do well to observe here the difficulty of ascertaining facts, of weighing probabilities, of allowing for prejudice and of estimating motives even concerning events enacted before our own eyes.

The latest crisis has arisen out of the action of certain officers in the British army, who, rather than serve the government in what seemed to them an attempt to overawe Ulster by force of arms, offered their resignations. How should such resignations be treated? Anxious to avoid action which might involve the army in the party strife, Colonel Seely, the Minister of State for War, sought to give assurances to these officers. In a memorandum, addressed to Brigadier-General Gough, one of the leading officers who had resigned, he said: "The government must retain its right to use all the forces of the Crown in Ireland, or elsewhere, to maintain order and support the civil power in the ordinary execution of their duty; but it has no intention whatever of taking advantage of this right in order to crush political opposition to the policy or the principles of the Home Rule Bill." But his attempt to prevent trouble raised the very issue he wished to avoid. When the facts became known, excitement in Parliament rose to fever heat. Could officers of the army limit the authority of Parliament? The Cabinet refused to consider themselves bound by a guarantee given without their knowledge, and the officials immediately concerned, Colonel Seely, and Generals Sir John French and Sir John Ewart, felt bound in consequence to offer their resignations. Though urged to withdraw their resignations they firmly declined to do so. What would the government do?

It was a dramatic moment when Premier Asquith, rising in his place in the House, announced that the resignation of Col. Seely had been accepted, and that he himself would assume in addition to the Premiership, the position of Secretary of State for War. The boldness of his course is a good omen of its success, and did much to reassure those supporters of the government who feared that weakness had been shown in taking a course that had even the appearance of making a bargain with the army for its support.

The seriousness of the issues involved has led to new suggestions for a settlement of the Home Rule question by agreement. Sir Edward Gray made a proposal that the parties discuss the possibility of a federal government that would give Home Rule not only to Ireland, but to Wales, Scotland and England. He held out hopes that such a solution might be reached within six years. In the meantime the Home Rule Bill should pass with the addition of the privilege offered by Premier Asquith to any counties to vote themselves out of the area of Home Rule for a period of six years.

Mr. Bonar Law, leader of the Unionist Party, suggested a referendum, and this measure Mr. Asquith seems to be seriously considering. The astuteness of that great political leader is noticeable in the debate on the floor of the House when the definite offer was made by Mr. Bonar Law that if the people at a referendum declared in favour of the government's measure of Home Rule, the House of Lords would consent to pass the measure as it stands. "Would this consent extend to the degree of using force to coerce Ulster if necessary?" asked the Premier. Mr. Bonar Law said it would. Mr. Asquith then turned to Sir Edward Carson to inquire whether Ulster would accept the decision of such a referendum. Sir Edward Carson made no definite answer but agreed to make a definite answer if a definite offer were made.

Why, we are asked, should Premier Asquith object so strongly to submitting the whole question of Home Rule to the people at a general election, a course most earnestly desired by the opposition? The answer is two-fold. In the first place, the Liberals claim that if the government resigned and a general election took place, it would be fought, in English and Scottish constituencies at least, not on the question of Home Rule, but on the Insurance Bill or on the land question. It would be complicated by a thousand various interests from the Labour Party and woman suffrage to the thousand and one local and personal considerations that often determine the fate of a candidate. In the second place, in order to take advantage of the Parliament Act to pass the Home Rule and Welsh Disestablishment Bills if necessary over the heads of the House of Lords, these measures must be finally passed by the House of Commons three times within two years and the time will be up this month. Any postponement would make it necessary either to amend the Parliament Act or to start the whole struggle over again. The Parliament Act as a means of overcoming the opposition of the House of Lords is now to be invoked for the first time. Will it work?

Mexico- After a three days' battle in which over a thousand men were killed, General Villa has at last captured Torreon, a city of 30,000 population, rich, centrally situated, and a railway junction. Its possession gives him and his Constitutionalists virtual control of the northern

half of Mexico. The hope of peace, however, lies not so much in the success of Villa, as in the approaching downfall of Huerta, whose weakness is now apparent. Torreon is directly connected by rail with Mexico city, some 200 miles away. If Huerta had had troops he could readily have rushed them to the rescue. "A government of fifteen million people that cannot muster an army of more than nine thousand when given three weeks to do it, for the battle of Torreon was well advertised, does not rest very firmly in the hearts of its countrymen." In the meantime General Villa, who has won a pronounced success, seems to be more and more determined to assert his independence of General Carranza, nominally leader of the Constitutionalist party.

Letters from Mexico, published in the Montreal *Witness*, throw an interesting sidelight on the degree of public confidence in the future of the various leaders and their parties. All these leaders are, of course, issuing paper money. The "promises to pay" issued by General Villa are said to pass current for one-fifth of their face value; bills issued by Carranza bring two-fifths, and the Federal bills issued by the government of Huerta at Mexico City bring three-fifths of their face value. This, however, was before the victory of Villa at Torreon. His paper money is probably more valuable now.

W. E. M.

And it Was.—A teacher recently received the following from the mother of an absent pupil:

Dere mam: please eggscuse Willy. He didn't have but one pair of pants an' I kep him home to wash them and Mrs. O'toole's goat come and et them off the line and that awt to be eggscuse enuff, goodness nose. Yours with respeck, *Mrs. B.*

Senator Joseph L. Bristow of Kansas contributed this one at a recent banquet when reference was made to the sometimes doubtful age of the fair sex.

In a village school a short time ago, so ran the senator's anecdote, the teacher was instructing a class of small youngsters in history, whose lesson for that day related to the civil war. The wish of the teacher was to impress on the minds of the children how long ago it had occurred.

"Just think, children," she carefully remarked, glancing up and down the class, "that terrible war was fought so long ago that even I do not remember it."

"Gee, Miss Mary!" earnestly exclaimed one of the wondering kids, "was it before the flood?"—*Philadelphia Telegraph.*

Hints for the Library

Notes on Birds, Book No. 1, by Mrs. Anna Botsford Comstock. Price 30 cents. Published by the Comstock Publishing Co., Ithaca, N.Y. This is a nature study book of a new kind; it is a pocket manual for taking notes. It has thirty outline descriptions which are exhaustive and the particular terms applicable to the bird under observation are to be underlined, so that by reading the underlined words with a few additional remarks which have to be added, a good description of the bird is obtained. It also has outline sketches of thirty common birds which the pupil is to brush in with water-colours. This should prove a useful book in our schools and will be a great assistance in producing enthusiastic young naturalists. G. A. CO.

The New Public Health, by H. W. Hill. 128 pages. Published by Press of Journal-Lancet, Minneapolis. This small book written by a sanitary expert destroys many deep-seated opinions regarding infectious diseases and protection from them. It gives the most recent ideas regarding infection, particularly in relation to public health. The teacher should be able to supervise the health conditions of the school much better after carefully reading it. The mechanical get-up of the book is not attractive. G. A. CO.

"*Essays of Elia.*" Lamb. Edited by A. Hamilton Thompson, M.A., F.S.A. Price 60 cents; and "*Last Essays of Elia*", uniform with the above. These are two very attractive volumes issued by the Cambridge University Press, each with an admirable thirteen page introduction. Copious notes are also appended in explanation of the more difficult allusions with which Lamb's Essays abound. At the end of each text three indexes are added, giving (1) names of persons and places; (2) allusions to words, phrases, etc.; (3) authors, books, etc., alluded to or quoted by Lamb. H. G. M.

Documents of British History, 1815-1900, with problems and exercises, reprinted from "A History of England for Schools," by M. W. Keatinge, M.A., and N. L. Fraser, M.A. Adam and Charles Black, London. Price 16 cents. This little book of 80 pages contains many extracts which could be used with profit by any teacher of English History to add interest to his lesson. For example, there are found here excerpts from the text of the Reform Bill of 1832, from the reports of the parliamentary commissioners on factory conditions prior to 1833, from Sir Robert Peel's speech on the repeal of the Corn Laws, from General Gordon's journal written at Khartoum just before his death and from many other original sources. H. G. M.

A Source Book of English History, for use in Schools. Edited by Arthur D. Innes, M.A. Vol. II, 1603-1815 A.D. 280 pages. Price 85 cents. This text, just issued by the Cambridge University Press, contains valuable illustrative material on many of the important questions of this period. Some of the sources drawn upon are: Clarendon's "History of the Great Rebellion", Stafford's "Despatches from Ireland"; "Cromwell's Letters and Speeches", by Thomas Carlyle; Horace Walpole's "Memoirs of the reign of George II"; Henry Grattan's "Speeches"; Edmund Burke's "Thoughts on the Present Discontents". Occasional illustrations and an index add to the attractiveness and value of the book as a reference work. H. G. M.

First Year Chemistry, by Wilhelm Segerblom, A.B., Instructor in Chemistry at the Phillips Exeter Academy. Pages xxv+410. 14×20 ×3 cm. 1909. Price $1.25. Exeter Book Publishing Company, Exeter, N.H. The plan of the book is "to use the inductive method rigorously in the first ninety experiments—about one-third of the book—beginning with the metals. The last four of these ninety experiments contain a short chemical investigation of a substance whose composition is unknown to the student. This is followed by the theory of chemistry, with experiments to illustrate the laws and principles. Considerable descriptive chemistry, upwards of sixty experiments, follow." This is an admirable book, of the form of a laboratory manual. It covers a good deal of our honour matriculation course, but it is chiefly as a beginner's book that it would appeal to Ontario teachers. The illustrations, some eighty-seven, are photographic. The paper, type, and cuts are very pleasing. H. A. G.

Shakespeare's Stories, by Constance and Mary Maud. Cloth, 271 pages. 1*s*. 6*d*. Edward Arnold, London. It is difficult to paraphrase Shakespeare and retain much of the vigour of the original, and yet it is necessary to paraphrase in order to bring to young children a knowledge of these dramas. In the book under review, nine of the best Shakespeare plays are given in story form, and the work has been very well done. Most of the conversations are direct quotations.

The Threshold of History, by H. R. Hall. Price 1*s*. George G. Harrap & Co., London. An interesting little volume descriptive of the life of men in England in the dim times before the dawn of history. The ways of life of these primitive folk are presented in a vesture of imagination and with a minimum of embroidery. Great care has been taken to keep the stories true to the ascertained knowledge of early times. Boys in the Third and Fourth Book classes will enjoy reading this book and it will enable them to bring to their study of history more accurate ideas of the manners and customs of our forefathers.

Notes and News

[Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this section.]

The first Friday in May will be Arbor Day.

Miss Isabella McDougall, of Queen's University, has accepted a position at Aylmer, in succession to Miss Nellie Harris.

Miss Rosa B. Hill, of Essex, became assistant at the Kars Public School after the Easter vacation.

Miss Florence Colgan, of North Bay, formerly of Lindsay, Ontario, will occupy the position lately vacated by Miss Margaret Morrison at Gillies' Depot.

Miss R. V. Martin, formerly teacher of S.S. No. 4, Belmont, has been succeeded by Miss Mabel C. McQuigge, of Blairton.

Mr. Rolf M. Proudfoot, of Fullarton, a recent graduate of the Faculty of Education, Toronto, has been appointed Assistant Master in Kent Public School, Toronto.

The position of Science Master in the Almonte High School has been filled by the appointment of Mr. R. Y. Young, of Kingston.

Mr. Thomas Carscadden, M.A., who has been Principal of Galt Collegiate Institute since 1885, has been obliged, on account of ill-health, to resign his position. He will remain on the staff as English master.

Mr. B. L. Cook, a member of the 1912-13 class in the Faculty of Education, Toronto, is teaching Junior English and History in the Sarnia Collegiate Institute.

Mr. Alfred T. Seaman, aged 21, son of Principal J. D. Seaman, of Charlottetown, has been selected as Rhodes Scholar for Prince Edward Island. He is a gold medalist of the Prince of Wales College, and has an excellent record as an athlete.

Mr. Edward Faw, of Dewson Street Public School, Toronto, has been appointed instructor in Manual Training at Riverdale Collegiate Institute.

Professor Alfred T. DeLury and Mr. Main Johnson, of Toronto, have been appointed members of the central executive board of the International Federation of Students. The Federation consists of a union of students from all parts of the world, and the present is the first occasion on which Canada has been represented on the executive board.

Principal E. W. Hagarty, of Harbord Collegiate Institute, Toronto, has received the rank of Honorary Colonel. Hon. Lieut.-Col. Hagarty is an ex-Queen's Own man, and was once an officer in the 25th Elgin Regiment. He is the first educationist to receive that honour.

Professor Mackenzie, Manager of the Penny Bank, announced at the annual meeting that there were 288 schools and branches extending over Ontario and the Dominion. He presented to the Directors the following interesting report: Cash on deposit at Ottawa, $275,500.00; number of accounts, April, 1905, to March, 1914, 118,000; number of accounts entries made, 3,000,000; number of deposits, 2,982,046; number of withdrawals, 159,715; Cash handled, April, 1905, to February, 1914, $1,120,018.45; total deposited (April, 1905, to February, 1914), $624,481.23; total withdrawn (April, 1905, to February, 1914), $495,537.22; children's savings transferred to chartered banks, $32,895.84.

Victoria Day will be celebrated this year on Monday, May 25th.

Dundas County will be well equipped with High Schools after September 1st. The Morrisburg Continuation School has been made into a High School and will make the fifth in that small county.

Dr. John R. Mott, secretary of the World's Student Christian Federation, describes High School students as the greatest single asset of a nation.

The citizens of Scarboro Township have organised a Township Association, consisting of the different school trustees throughout the township. This is the first township association in Canada, and the trustees of other townships will watch the experiment with much interest. The aim is to make rural schools more efficient and attractive.

The Protestant Board of School Commissioners, Montreal, have increased the salary of every teacher by $100 and kindergarten assistants by $50.

The Kingston Board of Education raised the maximum salary of Public School teachers from $700 to $750.

The Management Committee of the Woodstock Board of Education are about to adopt some system of medical inspection.

Dr. W. E. Struthers, chief Medical Inspector, Toronto, has received a communication from the Bureau of Education in Washington asking for full details and photographs of the open-air schools. He has also been asked by the Victoria League Imperial Health Conference to contribute material illustrative of school and similar conditions in Toronto, for use in the Victoria League Exhibition to be held in London in May of this year.

We note with a great deal of interest that the Industrial Schools of Windsor, Stratford, Cornwall, Toronto, and other places have just completed one of the most successful year's work since their establishment. In several places closing exercises were held, and it was the unanimous opinion of those who saw the demonstrations in the different places that the work fully justifies the expense.

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In the presence of the members of the Ontario Cabinet and many of the other members of the Ontario Legislature, as well as the heads of the different faculties and colleges of the University of Toronto, His Royal Highness the Duke of Connaught formally opened the magnificent Royal Ontario Museum in Toronto.

The time-table for the Junior High School entrance examinations is: June 17, Composition and Spelling; June 18, Arithmetic and Literature; June 19, English Grammar, Writing and Geography. For the Junior Public School Graduation, the programme is: June 15, Elementary Science, British and Canadian History; June 16, English Grammar and Art; June 17, Algebra and Geometry, English Composition; June 18, Arithmetic and Mensuration, Literature; June 19, Bookkeeping, Spelling and Geography.

Senior Public School graduation, the senior High School entrance, the Model entrance examinations, and the lower school examination for entrance into the Normal Schools and Faculties of Education commence Monday, June 8th—application to be made by May 1st.

Matriculation examinations, honour and pass, and the upper school examination for entrance into the Faculties of Education begin Thursday June 11th; middle school examination for entrance into the Normal Schools begins Monday, June 22nd—application not later than May 15th.

The Model Schools will open on August 18th and the Normal Schools on September 1st, the latter date being two weeks earlier than usual. Applications must be in by August 15th for the Model Schools and August 29th for the Normal Schools.

In our March number reference was made to the *Manual Arts Magazine* which is printed and published by the boys of the Manual Arts School, Ottawa. We are indebted to Mr. Arthur Crowson, instructor in printing, for a copy of the Easter number of the same magazine. This is an eight-page journal with cover. We notice a marked improvement; the compositors and the pressmen of the Manual Arts School have progressed wonderfully in their art since the beginning of the year.

MANITOBA.

Mr. R. Fletcher, B.A., Deputy Minister of Education, recently attended a meeting at Ottawa of those directly interested in agricultural education for the Dominion. Mr. Fletcher was summoned by Dr. C. C. James, Deputy Minister of Agriculture, who is directing the expenditure of the Federal Grant for Agricultural Instruction.

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About 500 school trustees recently met in annual convention at Winnipeg as delegates from the schools of the province. Dr. C. C. James, of Ottawa, addressed the convention at two of its sessions.

Mr. E. K. Marshall, B.A., principal of the West Ward School, Portage La Prairie, has recently been appointed English Master in the Collegiate Institute of that city.

Mr. H. W. Watson, Director of Elementary Agriculture, recently visited several High Schools in North Dakota, Wisconsin and Minnesota to investigate the methods employed in introducing and carrying on Courses in Agriculture in the Elementary and High Schools of those States.

NOVA SCOTIA.

Dr. Soloan, of the Normal College, Truro, and Dr. A. H. MacKay, Superintendent of Education, Halifax, have been in attendance at the annual meeting of the Simplified Spelling Board in New York.

Principal Cumming, of the Agricultural College, and L. A. DeWolfe, Director of Rural Science Schools, attended the Agricultural Education Conference in Ottawa, March 24th and 25th.

Teachers' Institutes are being held in Oxford, Cumberland County, and Weymouth, Digby County, at the beginning of Easter vacation. Inspectors Craig and Morse are in charge.

The final meeting of the Committee on Revision of the High School Course of Study will be held in Halifax, April 10th.

The School Garden campaign is receiving strong support from the teachers wherever it is introduced. In small towns the gardening of vacant lots will be advocated. By way of experiment the town of Truro is undertaking such an enterprise this year.

ALBERTA.

Following the legislation of last session in relation to consolidated schools there is considerable interest being taken in the larger organisation of districts. The first consolidated district formed is that at Warner, south of Lethbridge. Others are considering the matter. A representative of the Department of Education is usually present to assist at discussions where meetings are held. While special grants are given to consolidated schools and simple legislation enacted for the setting up of such schools, the department is not carrying on any propagandist campaign, as it appears desirable to have such schools a matter of indigenous growth and backed by a local conviction of their desirability and possible success. The sparseness of population in most parts of the province makes the transportation of pupils difficult, and it is not thought that consolidation will take place to any great extent. Consolidation of rural school districts with village or town districts may occur in some cases.

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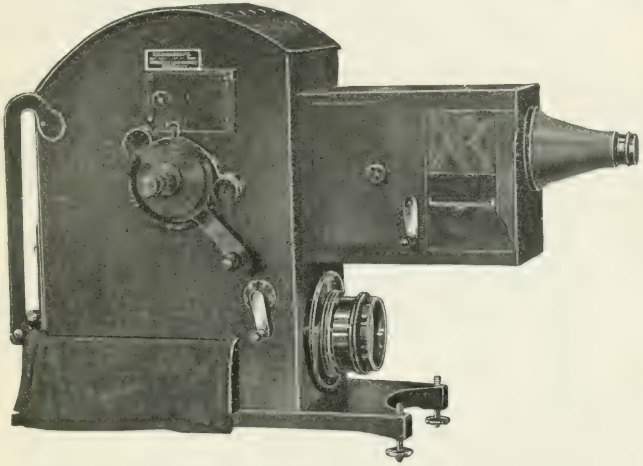

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The first session of the Alberta Provincial Schools of Agriculture closed at the end of March, after five months' work. About one hundred and sixty freshmen in all took the course at the three schools at Vermilion, Olds, and Claresholm. No tuition fees are charged. The pupils have to board at private houses, as no dormitories are yet provided. The schools are receiving strong support in the province, and the prospects are favourable for a considerably larger attendance next year.

QUEBEC.

After many years of very successful work as principal of the Montreal Technical High School, Dr. MacKercher has recently resigned. The appointment of a successor is to be made shortly.

Miss Ella Patton, for a number of years in charge of the transition work in the Lachute Academy, has been appointed recently to Kensington School, Montreal West. Miss Patton's work is very widely known.

The new Westmount High School is very rapidly approaching completion. It is expected that it will open in September, and appointments to the various departments are already being made.

Miss A. J. Rodger, formerly of Montreal High School, has recently been appointed to the staff of Macdonald College Practice School.

Montreal has recently adopted a new scale of salaries for all the teachers under the Protestant Board. The maximum for female assistants has been raised to $950, and the maximum for male principals has been raised to $2,500. It is interesting to note that the Board has gone back to the twelve-payment system.

Latin and Physics, as academic subjects, have been dropped from the courses in the School for Teachers. The time will be spent in a training more directly professional.

NEW BRUNSWICK.

Sir Maxwell Aitken has donated $1000 a year to Harkins Academy, Newcastle, N.B., to be used as prizes and as scholarships to aid deserving graduates in taking courses in Arts, Theology, Law, Medicine, Engineering, Forestry and Agriculture. For the present year he specifies that there shall be a prize of $250 to the pupil making the highest standing in the school who enters the University of New Brunswick, and a prize of $100 to the pupil making the highest standing who enrols at the Provincial Normal School. The balance of the fund for future years is to be distributed by a committee of local men composed of the Principal of the Academy, the Collector of Customs, the Manager of the Royal Bank, and Sir Maxwell's attorney. The donor allows the committee great latitude in selecting pupils for scholarships, but suggests that they be awarded according to the needs rather than to the abilities of the

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pupils, and that scholarships be not open to students who take courses at denominational colleges, except for Theology. Harkins Academy is one of the Superior Schools under the Provincial Board of Education.

The Board of School Trustees of St. John have granted increases in the salaries of the teachers on their staff, from the beginning of the current year as follows: Principals of buildings having 10 rooms or over $200, principals of buildings having less than 10 rooms, $150, reserve teachers $50.00, all others $100 per annum.

Chief Superintendent Carter recently returned from attending the National Education Association of the United States, held in Richmond, Va., February 23-28. While away he visited many of the leading schools and colleges in Richmond and New York City.

Promoters of the Kindergarten system in St. John have been urging the Provincial Government to make kindergarten a part of the school system of the Province. Recently, representatives of the St. John Board of School Trustees, the City Commissioners, and the Kindergarten promoters met with the Chief Superintendent of Education to discuss the matter. It is not probable, however, that any legislation authorising the establishment of kindergartens as a part of the public school system will be enacted by the legislature during the present session.

The Fredericton school board have secured plans for a new six-room school building which they expect to have ready for the opening of schools in August next. This additional accommodation has been needed for some time, as many of the schools are much overcrowded.

At the request of the Federal Minister of Agriculture, the Provincial Government has appointed a Committee to examine the report of the Royal Commission on Technical Education and report their views thereon to the Federal Minister. The Committee is composed of Hon. D. V. Landry, Provincial Secretary; Chancellor Jones of the U.N.B.; Chief Superintendent Carter and Mr. W. Frank Hatheway of St. John.

The Lesson of the Prodigal Son.—The Sunday-school lesson was about the Prodigal Son, and the teacher was dwelling on the character of the elder brother.

"But amid all the rejoicing," she said, "there was one to whom the feast brought no joy; to whom the prodigal's return brought only bitterness; one who did not approve of the feast and who had no wish to attend. Now who was this?"

Silence for a moment; then a small voice said: "Please, ma'am, it was the fatted calf".

"Morning in the Valley."

By F. H. Brigden, O.S.A.

It is what the parent or teacher is, not what he pretends to be, that influences children. We hear it said that parents and teachers should be models to their children: nothing can be more disastrous than to attempt that. Few if any of us are worthy to be models, and to try to stand as such is to think more and more about how we appear, and less and less about what we are—which is the high road to hypocrisy. What we need is not to pretend the virtues necessary to helpful influence over children, but to struggle toward those virtues with all our might.

—Griggs—*Moral Education.*

The School

"Recti cultus pectora roborant"

Editorial Notes

Summer Vacation.—As you read this, the summer vacation is within hail. How do you intend to spend it?

Various notes struck at Easter by the provincial associations of the teachers of Canada had one meaning. The teachers of Canada are overworked. A recent conference of the Health Officers of Ontario struck a note with another meaning. At best, school rooms, congested as they are with human life, cannot always be hygienic, but the schoolrooms of Canada are often positively unsanitary. Overwork and unsanitary work—these tell the story of the lives of many Canadian teachers during the past year. For all such teachers the long summer vacation should bring rest. Rest has many meanings. It may be a change of interest or a change of scene, life in the fields or woods, or by water ways, a trip to New Ontario or Western Canada, down by the sea, or to Europe. Through such rest the overwrought teacher fits himself for the ensuing school year.

But there are other teachers, men and women of vigorous bodies, whose duties have not been onerous and whose schools have not been unsanitary. These approach the summer vacation with a different spirit. How shall they spend that vacation? Rest is not with them a prime consideration. In work, renewed professional and academic training, they fit themselves best for the tasks of the next year and the years thereafter. The great educational institutions of Canada recognise this fact in their annual offerings of Summer Courses. Ontario institutions give courses leading to degrees in arts and pedagogy, to Normal Entrance and Faculty Entrance standing, and to professional certificates in agriculture, manual training, household science, music, art, physical training, and the commercial subjects.

Which courses do you take?

Re Ontario Educational Association.—An English teacher who attended the Easter meetings of the Ontario Educational Association for the first time has on request sent this office his impressions. They are given here in the form in which they reached us. "I was impressed with the solidarity of the educators within the Province. In England, France,

and Germany each section is, as it were, in a water tight compartment. The secondary teachers have little or no dealings with the primary and kindergarten teachers. Even in the United States, the National Education Association fails to attract trustees to its meetings, much less to organise them into a department. The second feature I noticed, a unique one, I think, in the educational meetings of the world, was the offering up of prayers at the beginning of each of the sessions. This is undoubtedly an inheritance from Scotland. But Ontario now outstrips its model. Nowhere in the world, so far as I know, are churches and chapels so well attended as in this Province. A third feature, which is most impressive to the visiting teacher, is the large attendance at each of the meetings. Only people who are keenly enthusiastic about educational matters would devote a brief and well-earned holiday to their improvement along professional lines. The cynic might say that it was the lure of the city and not professional zeal that brought the crowd together. But I don't think so. Although in some of the meetings the display of colours in the Easter bonnets of the women out-rivalled a Swiss mountain valley, yet the dominant note was earnestness, not frivolity. The young folks who 'cut' the evening meetings had a valid excuse for they had done their duty in the earlier parts of the days. Lastly, the spirit of friendliness which was everywhere abroad at the meetings impressed me. The warm hand-shake and the sincere yet not too effusive greeting, for Ontario folks are still dour, would never fail to attract the attention of a stranger".

Gift of Books. The Library of the Faculty of Education of the University of Toronto has recently been enriched by the addition of some three hundred books, the gift of Mr. William Houston, M.A., a member of the University Senate. The gift is composed almost wholly of grammars and texts on linguistic studies. The books date from 1800 and provide admirable source material for a study of the development of this branch of teaching during the nineteenth century. The material is being catalogued and soon will be available to students and the general reader. The staff of the Faculty of Education take this opportunity of thanking Mr. Houston for his gift, and trust that his generosity will induce others to follow in his steps.

Reports of Inspectors.—Many urban inspectors in Ontario make annual reports to their school boards. The law does not require that these reports be printed or circulated. Yet the more enlightened school boards undertake the publication of these yearly "stock-takings", believing that they will be well repaid for the expenses incurred by the increased interest in education they arouse in the public at large. For progress in education depends as much upon the good-will of the general public as upon the school staff and school equipment. Publicity there-

fore is an important instrument of reform and should be used as extensively as funds permit.

Two reports of inspectors have reached us which are of such general excellence and so sane in outlook that we wish they could be put into the hands of all persons in the Dominion who are interested in education. The first and more extensive of these is Dr. J. H. Putman's annual report for 1913 on the Public Schools of Ottawa; the second is Inspector C. B. Edward's preliminary report for 1913 to the Board of Education, London, Ontario. Dr. Putman in his report discusses in detail such important topics as examinations, salaries and qualifications of teachers, school waste, subnormal children, and the training of kindergarten teachers.

Ottawa, it appears from the report, has practically abolished the High School Entrance examination. Pupils are admitted to the Collegiate Institute on the certificate of their Public School principals. Only those who come from points outside the city or from private schools, or who are not fully recommended by their principals now take the regular entrance examination. As Dr. Putman says "It is now possible for children attending any Ottawa schools under government inspection to pass from the kindergarten to graduation from the Collegiate Institute without submitting to any examination tests, oral or written, except those imposed by their own teachers". The scheme is apparently working well and justifies the vigorous defence Dr. Putman makes on its behalf.

Inspector Edwards deals with similar topics. We are pleased to see a discussion of such subjects as "utilizing the interrogative instinct in children" and "the school census and what it disclosed". Both Inspector Edwards and Dr. Putman are aware of the significance and usefulness of an 'age-grade' table. No other statistical table gives so much information about a school system as this one does. It shows the amount of retardation and elimination of pupils, the acceleration of pupils within the grades, the average age of pupils in each grade, and a host of other valuable facts. One can almost judge from it which children are mental defectives. No inspector's report, in our opinion, is complete unless it contains one. We suggest, however, that the census be taken on the same day of the year throughout Ontario. There are many arguments in favour of the first Monday in November being set aside for this purpose. A complete record of 'age-grade' tables for ten years would simply be invaluable for the teacher, the administrator and the legislator.

Ourselves.—With this issue THE SCHOOL completes its second year of publication. From the very beginning it has prospered. There has been a steady growth in its subscription list until now it has passed 4300. Throughout the year the journal has carried thirty or more pages per issue of the very highest class of advertising.

THE SCHOOL has readers in all the Provinces of Canada and from all parts of the Dominion letters come telling of the appreciation with which this journal is received. THE SCHOOL cannot deal exclusively with the class-room work and the problems of any one particular department. The teaching population of Canada is not yet large enough to support departmental journals, but we think we may venture to say that any teacher or officer in the profession will secure "value received" many times over in the reading of any number of THE SCHOOL. The credit for this condition is due to our contributors who have willingly given of their best for the benefit of the journal. We publicly thank them herewith.

This journal has endeavoured to be consistent with its aim as expressed editorially in its initial number. "In the first place THE SCHOOL will be Canadian in policy and in sentiment. There is, of course, much for us to learn from the progressive methods of American schools; and Canadian teachers can profit from the sound scholarship and thoroughness of English education. But Canada in the twentieth century is a new nation with ideals and problems of her own. Our own educators are familiar with our educational needs and with the sentiments of the Canadian people, and in the discussion of educational problems in the pages of THE SCHOOL they will present the Canadian point of view" . . . "THE SCHOOL will, in the next place, aim to present general principles and to give different points of view, rather than to supply in detail mechanical devices and exercises for the classroom. To enable the teacher to help himself is a worthier purpose than to attempt to supply methods and materials ready-made. The teacher who has a point of view, but no devices, will ultimately make devices for himself. The teacher with no point of view can never teach, in the truer sense of the word".

During the year 1914-15 THE SCHOOL will be still further improved in every department. It will be indispensable to every progressive teacher in Canada. But to make it so we need the continued co-operation and interest of our friends of the past two years, and we need to make new friends. We are anxious to have our readers tell us what they need in an educational journal, and we hope, further, that they will implement their expressions of what is needed by furnishing us with examples in the way of articles, descriptions of educational experiments, and notes of pedagogical interest. With the support of the members of the teaching profession, THE SCHOOL will continue to give its readers the benefit of the newest and the best in educational progress.

A NATURAL RELATIONSHIP

Teacher (sharply)—Jones, who was George Washington's father?

Jones (taken unaware)—George Washington's father was—he was—George Washington's father was the grandfather of his country.

Primary Reading

Inferences that may be drawn from our recent studies of the subject.

F. E. COOMBS, M.A.
Faculty of Education, University of Toronto

VI.

IN several numbers of the present volume of THE SCHOOL we have endeavoured to bring to the conscious attention of primary teachers those problems which lie at the very core of their work in primary reading. We directed our attention:—(1) to the nature of the reading process, and more particularly to the demands that such a process makes upon the uninitiated child of the primary grade (see articles in Sept., Oct., Nov., and Jan., numbers); (2) to a brief exposition and criticism of the many endeavours—or methods, if you will—that teachers have made to initiate the child into the mysteries of this process (see articles in Jan., Feb., and May numbers). My task in the present number is to bring together those inferences which lie more or less implicit in these recent studies.

The first and most patent inference is that no one of these methods, which we have previously described, is—*in se*—a panacea for all the problems of primary reading. The method which approximates most closely to such a standard, is, in my opinion, the concentration method which was outlined in the May number. Nevertheless it must be admitted—I think to our discredit—that few primary teachers have incorporated even the simplest basic principles of this method in their own. Perhaps the combination method which endeavours to combine within itself all the excellencies of the others—and of course none of the defects—is a superior method.

The description of this method would naturally form the constructive side of the present series of articles. However, the article by Miss McKay in the January number, and the articles by Miss Phillips and by "K" in the present number so closely coincide with my own views, that it is wholly unnecessary to go into detail here.

A second and even more important inference is that reading can no longer be considered *as an end in itself*. The assumption upon which past generations of teachers have worked—and indeed the assumption that is still very largely in vogue in the Province of Ontario—is that words must be first learned by themselves as words before they can be used to awaken in consciousness those ideas which we have convention-

ally assigned to them. The inevitable outgrowth of such an assumption is that reading no longer remains as a means to an end, but is exalted to the position of an end in itself. And the invariable accompaniment of such a position is that teachers busy themselves in developing and perfecting mechanical devices for the accomplishing of this lifeless and mechanical task of word-learning, instead of directing the pupils along the really vital lines of self-improvement and self-realisation. These are the gods at whose altars we have worshipped in spite of the fact that the history of thought warns us repeatedly and incontrovertibly that nothing can be more disastrous than the exalting of the part or means to the rank of the whole or end. What is needed to-day is a new view-point that will enable teachers to see the reading process in its proper perspective and that will relegate all devices—be they alphabetic, phonic, phonetic, word, sentence or what-not—to their proper sphere. I believe we have the promise of such a view-point in the fundamental assumption of the concentration method. I further believe that, if primary teachers would master the basic principles of this method, sooner or later the whole method of primary reading would be revolutionised, and revolutionised without discarding those devices which are so dear to us, which we have mastered so well and which many teachers have used so effectively.

A third inference which arises more or less directly out of the preceding one is that a child in the first years of its school life should be obtaining those experiences which will furnish the basis of the natural interpretation of what he will later read. The pupil's time should be spent in the study of what Francis Parker calls the central subjects, e.g., nature study, geography, history, literature—including myth, fable, memory gems—constructive work, and all such kindred subjects. In so far as reading is taken, in the first year at least, it should arise incidentally and vitally in connection with his study in these subjects. Personally, I am very strongly of the opinion that the young mind that is thus fertilised with ideas will very soon out-strip, even in reading, the pupil—and their name is legion in Ontario to-day—whose whole school life is occupied with mechanical tasks in reading and arithmetic. I think this general position may be further defended by the findings of psychology. Psychology points out that the pupils of the primary grade:—(1) are ear-minded, rather than eye-minded, and therefore should be engaged in oral work; (2) are active or motor in their habits rather than passively receptive, and therefore should be engaged in games, constructive work and such kindred things. (3) are at a stage in their life when memory is good, and hence should be engaged in storing their minds with treasures; (4) are at a stage when habits are acquired most easily and thus should be given work which will lay the foundation of a manly and

beautiful character. To spend four-fifths of the first year of a child's life in school in the monotonous and largely unintelligible drudgery of reading and arithmetic, when so many rich treasures lie within his grasp, is a crime against childhood.

Our fourth and final inference is that reading as a subject in itself— and may we add arithmetic— are introduced much too early. They should arise incidentally in connection with the real, vital, interesting experiences of the child's life.

Hints for the Library

More Pictures of British History, by E. L. Hoskyn, B.A. The Adam and Charles Black, London. 1*s*. 6*d*. Macmillan Co., Toronto. Fifty-eight illustrations, thirty-two of which are in colour. A delightful little volume for teaching history to elementary classes. It deals mainly with the persons whose thoughts and ideals have made history. The stories are told so simply and so vividly that they are well within the grasp of children of nine or ten years of age.

Boys who became famous, by F. J. Snell. Price 1*s*. George G. Harrap & Co., London. Illustrated. An excellent book for boys. Each story contains one or more good anecdotes. Some of the boys included are, Mozart, Byron, Hans Anderson, Davy, Bonaparte, Lamb, Franklin, Watts, Tennyson, Dickens, Washington, Ruskin, Scott and Mark Twain. This book will make a valuable addition to the Public School Library.

The Heroes, by Charles Kingsley. Another volume of the Pitt Press Series. Price 1*s*. The Cambridge University Press, London. An excellent edition for the school library. The type and the illustrations are good. The stories concern Perseus, the Argonauts, and Theseus. A dictionary of proper names is appended.

Principles and Methods of Teaching Geography, by F. L. Holtz. xii+359 pages. 33 figures. The Macmillan Co., 1913. Price $1.10. This is a book for the teacher-in-training and the teacher and it is the most complete and most even of any method book yet issued. Geikies' is more illuminating on some branches but this covers the ground more fully. It presents the most recent methods of dealing with the different branches of geography, and it should be on every teachers' desk. Supplementary reading and the making and use of maps of various kinds are not sufficiently emphasized. G. A. CO.

Some Thoughts on Primary Reading

THE alphabetic, Look and Say, Phonic, etc., are methods of teaching the mechanical part of Reading—word-recognition,—but this is not reading. Reading concerns itself with getting the thought by means of word-recognition, and oral reading has the additional step of expressing this audibly.

The first step—thought getting—is the one to be emphasised in primary reading. I fear it is often neglected, and teachers are too easily satisfied with mere pronunciation of words, with the "1 - - - - see - - - - a - - - - big - - - - cat" reading of our own early days.

On the other hand, there may be too much stress placed upon proper expression, and pupils may be required to repeat glibly sentences containing simple thoughts. For example, a sentence, John has five white marbles, presents some difficulty in the recognition of the words, and when the pupil reads "John – has – five – white – marbles," the teacher asks him to say the sentence, or says it herself, and then asks the pupil to repeat. I can not see in this any expression of thought, but rather repetition of words. This perhaps is an outgrowth of the sentence method of teaching word-recognition. To me the important step in the early primary reading is "the getting of the thought from the words", either written or printed, and for the sake of discussion, the following method of teaching primary reading is briefly outlined:—

Two lesson periods each day are assigned to reading, and *both* of these, for the first month, are given to word-recognition. In these lessons a combination of the methods, before described in this journal, is used, with a preference for the "word-phonic" as the pupil progresses.

When the pupils have mastered the recognition of a considerable number of words, one of the periods may be given to *reading*, and this will consist in getting the thought and giving it in the pupils' own words.

For this purpose, at first, short stories (see later) constructed with a majority of words known to the pupils are written on the blackboard. The pupils, as desk work, study silently this story. The teacher, by questioning in class, ascertains how much of the story has been grasped and understood, and then asks one or more of the pupils to tell the story. The pupil who does so will express the thought naturally, because he is using his own familiar words, and is not confused with word-recognition at the same time.

He may not be able to tell all, but other pupils will help until the whole thought has been given. It is interesting to note with what keen pleasure the pupils enjoy this discovery of thought in the words.

One week may be spent in this type of exercise; and then the additional step of telling the story, using the words on the blackboard instead of their own words, is introduced.

When a fair amount of progress has been made in this section, cards may be prepared on which stories are written, again using words the majority of which can be recognised. At their desks the pupils study these (silent reading), getting the thought, perhaps expressing it by means of a picture as further desk work, and when the recitation period comes, the stories are told and, if time permit, are read. If time does not permit, the oral reading may follow during the next recitation period. During the time that this card reading is taking place, the transition from script to print is made, and then the pupils are ready for Primer reading. The Primer lessons should be conducted in the same manner as those of the card reading—silent study—expression in pupils' words—reading in words of book.

It may be necessary to re-state that during all this time one lesson per day has been given to word-recognition, and the words taught in this period will prepare the way for the reading lesson. There has been no attempt to teach new words, other than incidentally, in the recitation period given to reading; no undue stress has been placed upon the expression of the thought except in the natural way, and there has been no hurry to have the pupil say the sentence in the exact words on the blackboard, card or book.

The stories mentioned above do not mean sentences, but such stories as:—Sam saw a hen. The hen had a nest. The nest was in the pen. The hen ran to the pen. Sam saw her run. He found her egg. K.

The Diminutive

At the age of three Janet was an enthusiastic student of entomology. One day she discovered a caterpillar for herself, a very tiny one. "Oh, come here!" she called. "Here's a caterpillar, the cutest little tiny thing! I believe it's a kittenpillar!"

—Hamilton Pope Galt.

A Very Bad Man

A teacher of small children required them to report their misdemeanors to her at the close of school, provided they exceeded two. If they exceeded five, they were to stay at their desks and write them out.

A little girl familiar with fairy lore wrote:

"Dear teacher,

My Mr. Meaners are——"

—Mrs. L. V. H. B.

The Combination Method in Primary Reading

EDITH V. PHILLIPS, B.A.

IT is with feelings of excitement—for some, joyous; for others, fearful—that the little ones come for their first day at school. The teacher may or may not have been anticipated with pleasure, and at first a timid child may resent such a bevy of comrades.

Before beginning the subject of reading the teacher must show that she is a friend of each child, and extremely interested in the free child-world of play from which they have come. For this reason the time assigned to reading on the first day should be given to conversations about their homes, friends, and pets—in fact, any subject within the scope of childhood which will awaken interest and tend to break the barrier of strangeness.

The following day present a concrete object—a top. They recognise it; they know what wonderful things it can do. Their interest increases while several spin it and tell stories of their tops. Then the teacher draws it on the board and at the proper time lets the chalk say the word in various colours, sizes, and places. Each lesson should be short so that interest may be sustained.

For the next lesson encourage a discussion about a hen. Let them imitate the sound it makes, and, as constructive work, have each child cut out a traced outline of a hen. It will be noticeable that much of the timidity is disappearing. The word will be written on the board in different places, and the children will be allowed to trace these. They may make the movements in the air and, for seat work, attempt writing it on their slates.

Have this bit of constructive work preserved and brought up to the next class. For this lesson have the chalk tell a short story, which had been elicited from the children:—"I see a hen; I see a top". No emphasis need be placed on the word "a," as they may learn to recognise it incidentally. Using a variety of simple home-made devices, several such object and action words as may later admit of easy phonic analysis, e.g., hat, hop, fan, run, may be taught.

By the time the children have been at school a week it would prove helpful to teach a nursery rhyme. When the chalk has told what it says a few of its simple yet important words may be mastered by the same "look and say" method. With a few added phrases, e.g., "it is"; "here is", a real story in paragraph form may be understood in which the gaining of the thought will be all-important.

By the third week short classes in oral and then written phonic analysis should be given one of the class periods each day. They know the words to see them; they have had ample opportunity to use them in expressing some thought; and now that their interest has been fully awakened, they may be shown that such a word as top may be divided into at least two parts: t - - op. With simple words the reverse process of combining two such parts may be practised. Then within a few days division into three parts may also be shown.

Adding a constant supply of stories and pictures to insure sufficient oral expression, this outline might constitute the work covered in the first month of primary reading.

Interest must be the basis of any lesson in primary work. In what then should the interest be centred? Experience in the subject of Geometry shows that a pupil grasps ideas of a solid more easily than ideas of a point; he can handle the solid, investigate its use for himself; but when he is told that a point has neither length, breadth, nor thickness, it becomes something strange and combines with no knowledge he already has. So in primary reading. At first the symbol of a sound conveys no meaning. The tale told about the shape may, but as this is only a device, it is soon dropped, and the child has stored information for which he finds no future use.

Psychological tests prove that words which convey ideas are as easily recognised as symbols of single sounds. Thus thought instead of form may become the focal point of attention. However, a combination of the word, sentence, and concentration methods, although giving prominence to the basal purpose of reading, would still be open to the same defect as leads to the rejection of each one singly—how is the child to develop a constructive power over the tool of thought? For this reason when they have had sufficient practice in recognising the words standing for certain objects and actions, they readily learn to take the words apart, and see the individuality of each part without elaborate devices. Similarly they learn to build up a whole, and later new wholes—the indefinite becomes definite.

The use of nursery rhymes is important. They aid in proper word-recognition, because in this way words in a sentence perform their true function; also the child's mind is being developed by the opportunity of holding larger elements of thought than that contained in the short, one-line sentence.

Thus the theory governing the practice outlined is to glean from every field where there has been a rich harvest in conscientious experiment so that the seed we may sow in the soil—the plastic minds of children—may not be blighted by rust, but may be embryonic of a richer harvest. This is the combination method in primary reading.

Class-room Devices for June

MARGARET D. MOFFAT,
Bolton Avenue School, Toronto

HOW many teachers know what a blessing carbon-paper is? A sheet of carbon-paper 19″ by 25″ costs five cents, or six may be had for twenty-five cents. One sheet would last from half a year to a year. It can be cut into eight pieces the size of a small pad. And if the pad paper be fairly thin, these would make six or seven reproductions of an exercise or a drawing quite distinctly. Place the sheets of carbon paper between the leaves of the pad, the carbon side toward the leaf below. Write the exercise on the top leaf heavily with an H.B. or a No. 2 lead-pencil and you have work for six or eight pupils. Carbon-paper can be got at art stores or fancy-work stores. Use dark blue if you can get it. With carbon-paper on hand you will not need to hurry to school to get work put on the board, nor will it be necessary to waste recesses and noons in that way, but you can spend that time, as you should, superintending the children's play.

Work in envelopes also saves much blackboard writing and space. With a clear board the children themselves have more room for board-work which they love and which is good for them. There may also be room for a blackboard calendar, or an honour-roll or a poem or drawings. At the close of a recitation give each child an envelope in which is his seat-work exercise. Afterwards these envelopes are collected and kept in a large envelope. Save the envelopes which arrive with government bulletins for that purpose. Make the small envelopes of strong paper. Write upon the outside what is contained in each.

Reproduction Stories.—Always tell a story, which you wish the children to reproduce, at least twice. Three times is better. Can you remember any story, even a short one, which you have heard or read but once? If you can you are one of few. Don't expect more from children than you can do yourself. Tell it to all classes below the Third in simple sentences. A reproduction story should be short. This is quite long enough.

The Lamb with the Sore Nose. Away out West there is a sheep-farm. In the day-time the sheep and lambs eat grass upon the prairie. A little girl on a pony minds them. In the evening she brings them home. They are shut in a corral for the night. Well, once upon a Sunday morning Eva's father was wakened by a noise. He dressed and went out. The noise came from the corral. He went quietly over. And what do you think he saw? The lambs were standing in a circle looking at something. It was a musk-rat. The musk-rat tried to run through the circle, but every time he did this, the lambs stamped their feet at him. Then he ran back. At last the musk-rat caught one lamb by the nose. Eva's father had to go to the rescue. He took the lamb to the house and put tallow on its nose. The musk-rat ran off to his home in the slough.

(When a city child reproduces this she puts talcum on the lamb's nose). After telling the story give the children envelopes in which are lists of words which are liable to be mis-spelled. When they want to know how to spell a word they look it up on the list. The list also helps them to remember the story.

Meanings of Words.—After teaching a lesson in the Reader, test for meanings of words in this way. On your pad write sentences. Underline each word which has to have its meaning substituted. Write a list of meanings in a hit-or-miss order at the bottom.

Exercise:—The cat was *moping*. Growler was *indignant*. Cooks are *awkward* to hang. He was a *reflective* dog. The cat answered *pettishly*. I *offended* her. Re-write and leave out the italicised words. Put in the place of each one of these:—annoyed, clumsy, sulking, crossly, thoughtful, angry.

June is the month when everyone is tired of conventional lessons. Sandwich in as many game-lessons as possible. Give the pupils these to memorise in this way.

Second Classes—words ending in *age*.

The age of a small house—cottage. The age of a soldier—courage. The age of a sore leg—bandage. The age of a forest tree—leafage or foliage. The age of a berry-bush—fruitage. The age which carries you—carriage. The age you carry to the station—baggage or luggage. The age of a hole in a tank—leakage. The age of a boat journey—voyage. The age of an automobile-house—garage. The age of refuse from the kitchen—garbage. The age of a vegetable—cabbage. The age of a meadow—pasturage. The age of money—coinage. The age of a tile—drainage.

Third Classes—Nouns ending in — *ty*. — for a T—party.

A lovely T—beauty. A bulky T—quantity. A simple T—simplicity. A free T—liberty. A merry T—jollity, hilarity. A shy T—timidity. A daring T—temerity. A fast T—rapidity, velocity. A

greedy T—voracity, avidity. A truthful T—veracity, honesty. An endless T—eternity. A useful T—utility. A useless T—futility. A queer T—oddity. A weak T—frailty. A dull T—stupidity. An easy T—facility. A happy T—felicity. A meek T—humility. A poor T—poverty.

Fourth Classes—Words ending—*cate*

Kate goes to the country—rusticate. Kate moves out—vacate. Kate greases the wheels—lubricate. Kate is not strong—delicate. Kate points out—indicate. Kate proves the right—vindicate. Kate belongs to a company—syndicate. Kate gives you a seat—allocate. Kate can wrangle—altercate. Kate foretells things—prognosticate. Kate prays—supplicate. Kate makes several copies—duplicate. Kate tells lies—prevaricate. Kate mixes matters—complicate. Kate knows where places are—locate.

These lists can be enlarged, but all words cannot have their meanings indicated in this way. Not more than ten words should be given for memorising at one time. Test the classes orally upon them after each assignment. Then at the end of the month have a written test, like a game, with a prize of a new pencil, an eraser or a book, or simply draw a flag-pole and flag in one corner of the best papers with red or blue crayon and pin them upon the wall.

In many places there are a few terrible days between examinations and holidays. Something dramatic must be done to hold the children. This is the time for all the ideas to be got from the children's pages of newspapers and magazines. Show how to think out sets of puzzles. Make some up for yourself—sentences with hidden rivers, hidden animals, hidden flowers. Hide as many of the children's own names as you can for them to find. The letters of the name are in their consecutive order in the sentence.

Hidden names:—The boys are running races (Grace). Bring me an orange or get some pears (George). A house was on fire near us (Irene). He likes jam, especially currant jam (James). Art. hurt his leg (Arthur). He lent me his jack-knife (Helen). A negro lives in that house (Olive). I got that buckle from a belt (Mabel). They are painting the roof red (Fred). That is a belt for a fat woman (Isabel).

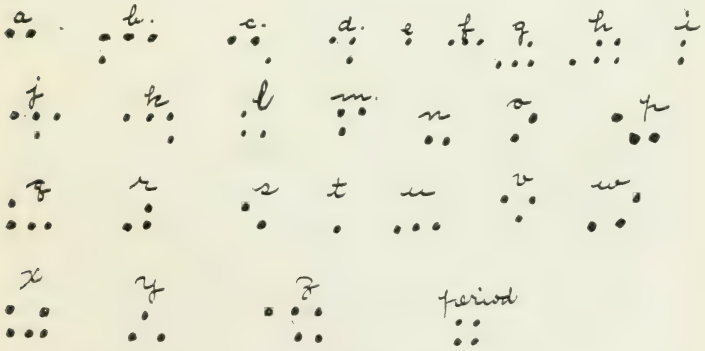
A puzzle like this is within their ability. "My first" means that the first letter of the word is one of the letters in the word "apple" but it is not in the word "plum".

My first is in apple but not in plum. My second's in spelling but not in sum. My third is in tree-top but not in log. My fourth is in puppy but not in dog. My fifth is in kitchen but not in room. My sixth is in darkness but not in gloom. My seventh is in entry but not in hall. My eighth is in tumble but not in fall. My whole is an animal big and wise. He is captured and tamed in spite of his size—(An elephant).

Cut-up poems make interesting busy work for June. Write upon your pad a "catchy" poem. Cut it into slips of one line each. Put them into envelopes and have the children arrange them upon their desks and write the poem upon their work-book as they think it should be. For Second Classes "How doth the little crocodile" is good from "Alice in Wonderland."

In Webster's Unabridged is the international signal code for vessels at sea. Draw these pennants in colour upon the board. Each represents a letter of the alphabet. Let the children draw the flags which represent nautical messages. "Ship ahoy!" "What's your cargo?" "Where are you bound?" "Icebergs to windward!" "England expects that every man will do his duty".

The alphabet for the blind also interests them. Point letters are punched upon manilla paper from right to left, and for reading, the paper is turned over and read from left to right. The punching raises the points upon the under side and the blind read these by touch. Half a cell is left between letters and a whole cell between words. Children love the novelty of writing their own names or something from the reader in point. Of course they just make the dots with pencils on their work-books.



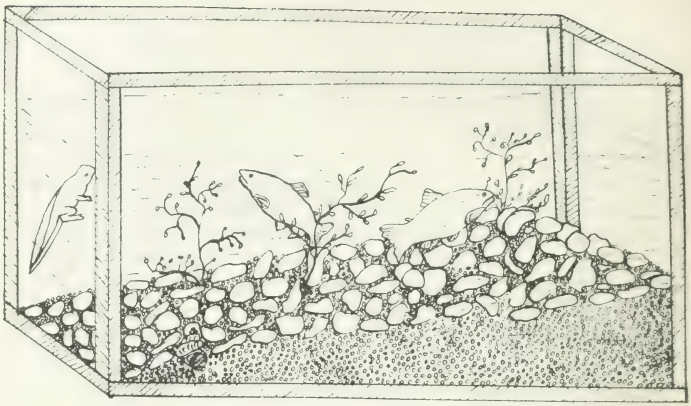
The Alphabet in point for reading.

Home Work

"Willie, why couldn't you find the result of these examples you took home?" inquired the teacher, in a sharp voice.

"Please, ma'am," replied the shaking boy, "me father says they wuz too hard for him, an' would you mind giving me a few easier ones to do?"

—K. A. Bisbee.



The Making of an Aquarium

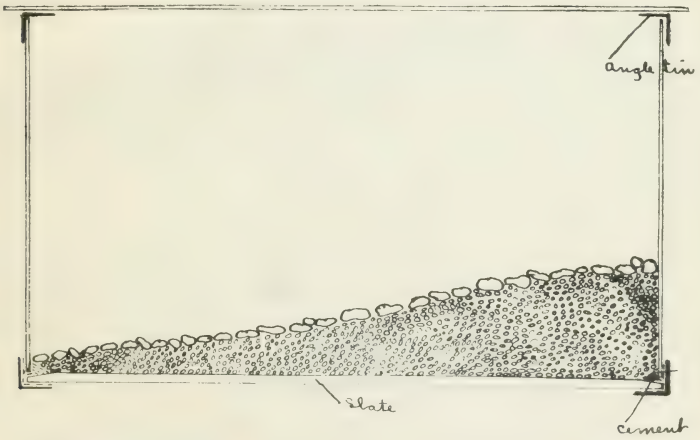
L. P. MENZIES, B.A.

TO instruct a child in the workings of nature through the medium of books is a very uninteresting and unprofitable task to teacher and pupil alike; but, who has not watched with pleasure a crayfish dig out the sand from under a stone to make a home for itself, come out in search of food, and dart rapidly back on the appearance of an enemy? We have often seen a fish travel through the water, but how many of us know that the tail is the chief organ propelling the animal? or how many of us have watched a tad-pole develop into a full-grown frog? If we have not seen such common things as these, how can we expect our pupils to observe details far more minute. Hence the problem that arises in the mind of the teacher of nature study is how can he place his pupils in a position to make definite observations. If he had a sufficient number of aquaria to give each pupil the care of one, the difficulty would be solved with regard to aquatic life.

The following is a description of how the teacher may have each pupil make an aquarium for himself at very small cost. Get as many pieces of angle-tin forty inches in length as the number of aquaria required; also the same number twenty-eight inches in length. Angle-tin may be made by a tin-smith thus:—cut a strip of tin forty inches in length and one inch wide. Mark the tin lengthwise along the middle to divide it

into two equal parts. Fasten the part on one side of the mark in a long vise and bend the other at right angles to it. This will make the corners of the aquarium.

The next step is to put this together to form a frame. Mark the forty-inch strip exactly in the middle, at eight inches from one end and at twelve inches from the other. At these points cut the strip half way through, being careful to cut from the same side each time. Then bend the pieces at these places at right angles, letting one-half of the cut portion slide over the other, and the free ends meet after the third bend. In doing this care must be taken to have the corners form right angles, otherwise difficulty will be encountered in the later part of the work. Now with a soldering outfit, solder the corners and free ends solidly together. This forms a rectangle twelve inches long and eight inches wide which we may use for the bottom of the frame. The top which is



exactly similar to the bottom may be made in the same way. Now cut the twenty-eight inch strip into four pieces each seven inches in length. These will form the upright corners of the aquarium, and in soldering them to the top and bottom it will be found better to fasten them to the inside. In doing this great care must again be taken to have these at right angles to the parts they join. The frame is now complete. The bottom must next be put in the aquarium. For this purpose a piece of glass twelve inches long and eight inches wide may be used. A stronger and better bottom, however, is made from a piece of waste slate, if this is available. This may be cut the proper size with a hack saw. It will

be an advantage to bevel the edges by grinding it on an emery-stone, until the edge is one-sixteenth of an inch in width.

The ends and sides must now be made. It will be found better to fit the ends first. For these cut two pieces of window-glass eight inches in length and six and fifteen-sixteenth inches in width. The sides require two pieces of glass each eleven and seven-eighth inches in length and seven and fifteen-sixteenth inches in width.

The bottom, ends and sides must now be solidly cemented into place. To do this a thin layer of cement must be placed between the sides and bottom and the frame, and the inside corners must be well filled. A good aquarium cement is composed of the following:—1 pt. plaster of paris; 1 pt. lithrage; 1 pt. fine white sand; 1-3 pt. finely powdered resin. The ingredients should be mixed dry and as needed mixed in a mortar with enough boiled oil and dryer (equal quantities) to make it about the same consistency as putty. Allow a few days to dry, then cement short wooden legs to the bottom.

The size of the aquarium may be varied, but for the best results as large a water-air surface as possible should be aimed at, to allow for the dissolving of oxygen from the surrounding air.

Place sand to the depth of one inch in each aquarium, and lead water into the bottom by means of a rubber tube, allowing the water to overflow till it is perfectly clear. Now empty the water and arrange the sand, high at one end and sloping to the other. Over this place a layer of stones which have been washed separately. Now put as much water into the aquarium as is required; this must be siphoned in, otherwise the contents of the bottom will be disturbed. Over the top place a piece of glass which must be larger than the top of the aquarium. This will keep dust from getting into the water, prevent evaporation, and yet allow sufficient air to get to the water.

The last task is stocking the aquarium. Do this with both animals and plants, as animals take in oxygen and give out carbon dioxide, while plants take in carbon dioxide and give out oxygen. If proper proportion is observed the water need never be changed. In fact it is a mistake to change the water of an aquarium as the life is disturbed, and it will be at least two weeks before the plants have recovered from the shock. Put the plants in before the water, fastening the roots under the large stones. Care must be taken to have some animals that will act as scavengers to keep the aquarium clean. For this purpose, small clams and tad-poles are useful; snails are best, but those which live on aquarium plants must be removed at once.

The best place for the aquarium is in an east window which is protected from the strong morning sun. Strong sunlight heats the water, and causes algae to grow. Food must not be given in excess, as it produces putrifying bacteria.

"Painting has been my recreation. If my work has given pleasure to some, it is probably because it has been inspired by a genuine love of nature. I would wish to do my share towards establishing a school of Canadian landscape art."

–F. H. Brigden.

Canadian Artists Series

VI.

MANY MEN in commercial and professional life turn to art for recreation and for a check upon the sordid influence of a too close application to business. Some of these become but art tasters and remain content with a cultivated ability to appreciate artistic skill, or a lack of it, in the works of others. Some go further and find their mission in exalting the goddess of art and in encouraging her votaries. Other few take up the brush and transfer to canvas the beauty which they see in the ordinary scenes which interest them.

To the last class belongs Mr. F. H. Brigden, man of affairs and artist. As superintendent of the art department of the well-known firm of Brigdens Limited, of Toronto and Winnipeg, he is a very busy man. But the weekly half-holiday and the summer and winter vacations find him with an artist's outfit in some attractive retreat of nature, painting the scenes which are making him famous as a realistic painter of the Canadian woodland.

But we must not think of Mr. Brigden as an amateur artist. His genius, training and works rank him among our foremost painters. From his father, a skilful wood-engraver and the founder of the Brigdens firm, he inherits his artistic tastes.

The Road through the Forest.
By F. H. Brigden, O.S.A.

To the careful training given him by W. Cruikshank and C. M. Manly at the old Ontario School of Art he owes much of his success.

He commenced his career as a water colour artist. Latterly he has devoted his leisure almost exclusively to painting in oils. Ten years ago he was elected a member of the Ontario Society of Artists. Since that time his pictures have been exhibited at numerous art exhibitions in Canada, the United States and Great Britain, and have received much favourable notice. At the recent annual exhibition of the O. S. A., he was represented by two pictures: "Morning in the Valley" and "North-

The Woodmen. By F. H. Brigden, O.S.A.

ern Solitudes". The first of these was purchased by the Ontario Government for one of the Normal Schools of the Province. Our frontispiece gives but a partial idea of its beauty. It is a typical June scene in the Don valley. The early morning haze veils in subdued tones the green of grass and trees. The majestic elm, the luxuriant pasturage, the browsing cattle, the drinking pool complete a picture of rustic loveliness.

It is not strange that the Canadian forest has possessed so strong a fascination for Canadian artists, for its influence has been important in developing sturdiness in Canadian life and character. "The Road through the Forest" recalls to many of us the experiences of our youth.

What farm-bred boy has not ridden upon just such a load of saw-logs, through just such an avenue of fragrant snow-laden pines! What happy memories linger around that ride,—memories of clear frosty skies, of the snow-tufted under-growth, of the countless tracks of the little wood-folk, of the great pervading silence broken by the driver's merry halloo, the jingling bells and the crunching snow!

The other forest scene, "The Woodmen", is similarly brightened with a touch of human interest. The little clearing in the midst of towering trees and snow emphasizes the stupendousness of the task which the early settlers faced in wresting a place of vantage from the great forest stretches.

S. W. P.

The Divinity That Shapes Our Styles

"And what did you learn at school to-day?"
"Oh, about the myths and goddesses and things."
"And what about them?"
"I forget them—all but Ceres."
"And who was she?"
"Oh, she was the goddess of dress-making."
"Why, how in the world——"
"Well, teacher said she was the goddess of ripping and sewing."

—Ruby Baughman.

According to Rule

"How is your mother this morning?" asked Mrs. Grey of the small boy who came with the milk.

"She's better," he answered.

"Can she sit up?" went on Mrs. Grey.

"No," answered the literal youngster. "She sits *down*, but she stands *up*."

—M. S. P.

Displeasing All 'Round

During the morning services at a Western university, just before the Christmas holidays, the pranks of the boys annoyed the instructor in charge very much. Finally he burst out:

"Boys! Such conduct is displeasing to God; and what's more, I won't stand it."

The Use of our Holidays

F. H. SPINNEY
Principal, Alexandra Public School, Montreal

IT is sometimes remarked that teachers enjoy far too many holidays, particularly when compared with workers in other vocations. Whether or not there is good ground for this criticism depends mainly upon the individual teacher, and upon the use that she makes of her holidays.

"I am resolved not to think of school until the opening day in September," was a resolution of a young teacher, starting forth for her vacation on the closing day of school. The value of that resolution depends upon its interpretation. If it means that she will banish from her mind all the annoying trifles that rendered some of her days unhappy, that she will forget the unparalleled "badness and stupidity" of Johnny and Tommy and Lucy and Nancy, it is certainly a most commendable resolution and should be observed to the very letter.

But if a teacher is true to herself and true to her profession, she will utilise all the opportunities offered by her vacation to add to her health, her knowledge, her efficiency, and her enthusiasm; for these are the essentials for continued success and happiness in her work. The only purpose for a period of play is to fit us to do better work and to add to the

joy of living. If it fails in that, it fails in everything. Idleness means stagnation, and is usually more tiresome than work.

One of our leading ideals should be to reach that mental attitude when we shall look forward with eager anticipation to the opening day of school, and then to maintain a mental attitude throughout the term that will enable us to look forward with pleasure to the beginning of each day. Some reader may object that such an ideal is utterly beyond human attainment; but the fact that many teachers have nearly approached the ideal proves that a near approach is within the reach of all. We should never quite catch up with our ideals; for then there would be no purpose in further living.

Whether we return to the homes of our childhood, travel to countries never seen before, or spend our vacation at summer schools, let our aim be to increase our knowledge, our interest, our enthusiasm, our loyalty to the profession. Holidays cannot be justly ranked as "too long" if they succeed in securing these splendid results.

Next year I hope to write some brief articles entitled "The Successful Teacher". These articles will include an account of visits to schools, both rural and urban, with an indication of the results likely to follow the methods that are described. Then, does not personality count more than method? And can personality be acquired? These will be interesting problems to discuss in relation to "The Successful Teacher". Let us think about these problems during our holidays.

Closing Day.

Ye Teachers, gaunt and weary, now
Do breathe with much Relief;
And pack ye trunks and hasten far,
Nor shed ye Tears of Grief.
No more ye need to use Reproof;
"Now, Jimmy, 'tend to me,
Extract ye Gumme from out ye Mouth,
And stay at half-past three".
All Frownes and Wrinkles on ye Face
May swift be smoothed away,
High hoist ye Flagge!
Loud ring ye Bell!
For school breaks up to-day.

—Contributed by a Toronto Teacher.

Sex Education

The Bureau of Education, Washington, D.C.

TO what extent can sex instruction be given in the public schools? Wide difference of opinion still exists among schoolmen on the subject, judging from reports received at the United States Bureau of Education. There is widespread recognition of what President Foster, of Reed College, calls "The Social Emergency", and general agreement as to the need of action against the social evil, but when it comes to the question of what part the public school shall play, the ideas range from a detailed plan of sex instruction beginning in the elementary schools to a determined opposition to any form of sex education whatsoever.

Professor Thomas M. Balliet, of New York University, outlines several points of attack in sex education. He believes sex instruction can now be given to the following groups: (1) To parents, by means of lectures; (2) to enlisted men in the Army and Navy, where the need for it is urgent; (3) to college students, both men and women; (4) to young people in Y.M.C.A.'s and similar associations.

Recently medical men have joined hands with schoolmen in the sex hygiene movement. Dr. Hugh Cabot, a distinguished physician of Boston, is one of the leaders in the demand for sex instruction in the schools. He declares that the policy of silence and punishment as practised in the past has failed. He suggests education, rather than punishment, as a remedy for social evils.

On the other hand, there are many, both among educators and physicians, who see danger in sex instruction in the schools. Dr. Tierney, President of Woodstock College, Maryland, expresses the fear that is in the minds of many thinkers, when he says: "Sex instruction is apt to put forward by some years the time of suggestion and temptation. Safety lies in diverting the attention from sex details."

Officials of the Bureau of Education believe that the sex hygiene question is about to assume great importance in many school systems. Chicago is now struggling with the problem; the board of education has appropriated money to provide lectures on sex hygiene to parents and to groups of high school pupils, with the ultimate idea of extending sex instruction to the elementary schools if the experiment with older pupils proves satisfactory. Teachers in New York and other cities report considerable success in incorporating sex instruction into elementary work in biology. State Superintendent Hyatt, of California, has issued a leaflet on sex instruction that has been considered worthy of distribution by the United States Government; while the American Federation of Sex Hygiene, carrying out its plan of constructive work against the social evil, has drawn up what is probably the most careful outline yet devised for sex education at every stage of life, both in school and at home.

Some Essentials for a Text-Book in Elementary Algebra

A. M. OVERHOLT, M.A.
Principal, Sarnia Collegiate Institute

WHILE the text-books on the subject of elementary algebra that have for some years been in general use in the Province of Ontario have been in the main satisfactory, there appear to be yet many features of the best of these texts that might be modified or entirely changed, to the great benefit, not only of the students, but also of the teachers of the Province. It appears to be necessary to supplement almost any text-book that might be used in elementary algebra by problems from other sources; and, moreover, the teacher finds that he must constantly change the order in which the work is proceeded with. While the former necessity is often an advantage to a teacher in that it keeps him on the alert for the best that is to be found in text-books that come to hand from time to time, the latter sometimes results in confusing the students, but this can easily be overcome by some minor changes in the arrangement of the chapters of the text-book in use.

It is to be regretted that the student beginning the study of algebra is kept so long from the main feature of the subject, namely, the equation. There appears to be no reason why the student should plod through a great mass of work that is usually given in elementary algebra before the subject of the simple equation is attempted. If the subject of equations is introduced at an early stage, algebra is much more interesting for the simple reason that some real end and purpose for studying algebra is presented to the student, without which it necessarily appears as a mechanical and useless jumble of figures and symbols with no direct point to the operations and no definite purpose as a result of these operations.

Graphical work relegated chiefly to the solution of equations is about the only work of this kind which seems to have found a place in any text-books in general use at the present time. Graphical work to demonstrate the negative quantity, the square of an expression, the square root of an expression, etc., can be used to very great advantage, and this work in graphs in connection with equations should not be left to the last chapter, but should be gradually introduced throughout, in connection with the work in simultaneous equations, simultaneous quadratics, etc.

Moreover, for our present purpose in Middle School algebra, there is hardly a text which a teacher scans in his general reading in preparation for class work that is suitable to our present needs in that form of the High School. Many propositions in geometry that junior pupils find difficult can be easily introduced with the elementary algebra, thus keeping up a parallelism between the subjects of geometry and algebra. Relative to this parallelism between the different subjects of the mathematical course, it might be mentioned that the most serious neglect in all our text-books is the failure to recognise the close relation between algebra and arithmetic. The reason for this fatal error probably is that an over amount of algebraic notation is used at the very outset and thus the marked relation between algebra and arithmetic is lost sight of.

Checks in the work in algebra are utterly overlooked. A successful student is one who constantly checks his work by reverse processes, thus verifying *all* his work. It is to be hoped, therefore, that some day some person will write a text-book in which numerous exercises, oral and otherwise, are given, and in which the writer will do the grading of the exercises and have the good sense to omit the answers from the back of the book, especially answers to oral exercises, easy exercises, in fact all except possibly answers to problems, or some difficult equations, which may with some advantage be given. The giving of answers should be reduced to a minimum and the work of a system of checks should be increased to a maximum.

Too much emphasis cannot be put on easy oral exercises and the recognition of allied forms in algebra. It is to be hoped that in the future a lot of this work will supplant long and most laborious exercises in division, highest common factor and the like, to say nothing of the monstrous absurdities in indices and sometimes in surds that have so long troubled the lives of beginners in algebra. Moreover, problems which are merely freaks or unnatural illustrations of certain processes for the solution of equations should be omitted from any text-book worthy of the name. There is surely ample scope within the everyday experience of a pupil's life for illustrations of the methods of solving equations. Too often the applications of factoring which might easily and naturally be made use of are ignored. To omit, for example, the application of the method of factoring the difference of two squares in obtaining the general solution of a quadratic equation is a mistake that should never be made, because of the deductions which can be made from this method and because it presents the easiest and most natural method for solving a quadratic equation.

Some Problems of the Ungraded School

MYRTLE CAMPBELL
Public School, Carleton Place

IN this brief article it will be possible to discuss only a few of the difficulties that will be met and must be overcome by the rural school teacher. The chief difficulty lies in the work of the junior grades, and even in these grades the actual class work is easier to provide for than the work at the seats. From the very beginning the seat work must be made interesting, easy, profitable and varied. It must appeal to the child's ever-changing interests and to his desire for activity, and must be so chosen and presented as to lead these interests and this activity in profitable lines.

The child from the farm is interested in the things he sees around his home. The teacher might have a picture book containing illustrations of familiar animals, birds and trees, tools and flowers, having the more familiar pictures at the first of the book. Then write the name plainly under each picture, and the child learns to associate the name with the object. Another plan is to cut out pictures of people and animals from magazines. Then paste these on cardboard, and cut them into pieces. The child puts them together again to form a whole. This, of course, is seat work that can be taken before the child has learned to read or to write. It is a good plan also to label prominent things in the class-room that the primary pupils may learn to associate both the spoken and the written words with the things; then for seat work the pupils may be required to write the names of certain of these objects that have been brought to their attention in a recent lesson.

Another form of seat work I have found interesting is to get designs for calendars for the different months, as grapes for October, Santa Claus for December, a skating scene for January, and flowers for June. Then with tracing paper trace several on cardboard, and have the pupils colour them with pastels or crayographs.

Besides the school work we should teach the children some games. The pupils in many rural schools are wholly ignorant of the best children's games. The recreative and educative values of games can not be dispensed with without striking at the heart of the child's physical, mental, and moral efficiency. Games bring the teacher into more perfect sympathy with her pupils, and quickly reveal their character. In winter especially, when the children cannot go outside, games become indis-

pensable. We have no gymnasiums in our schools, so it becomes necessary to allow the pupils to play in the class-room. You can teach them some guessing games that will keep them quietly interested. The following is a very good example of a guessing game: One child thinks of a number, and the others guess it by asking questions in this way—"Are you thinking of 3 and 4?" "No, I am not thinking of 7." "Are you thinking of 2 less than 5?" "No, I am not thinking of 3." "Are you thinking of 4 quarts?" "No, I am not thinking of a gallon." "Are you thinking of half of 4?" "Yes, I am thinking of 2."

When you wish to raise the windows to let in fresh air during recess, give the children an exercise in calisthenics or such a game as the good old "Pussy-Wants-a-Corner", or a modified form of it as follows: Write familiar words on large cards and place one in each corner of the room, and also at certain intervals between. Place a child at each card and appoint a Pussy who wants a corner. Have the children exchange corners by calling the name of the corner to which they wish to go. During these changes, or by correcting a mistake that has been made, the Pussy is to secure a corner. This game has all the interest and activity of the good old "Pussy" of our school days, and has the additional value of teaching words to the primary pupils.

A great difficulty of the rural teacher is the lack of books of reference for preparing lessons. As only the mere facts are given in the text-books it is very difficult to prepare lessons if you have not access to suitable books. This may be overcome to a great extent by a well-selected school library which the Education Department now encourages by very liberal grants.

In rural schools we have a better opportunity of teaching Nature Study. This is perhaps one of the most interesting subjects on the curriculum. We have nature around us in its budding beauty in the spring and in its bright declining glory in the autumn. The children see this on their road to and from school, and are delighted to bring to school varieties of fruit, vegetables, flowers and leaves. The flowers and leaves may be pressed and mounted on cardboard, and be used for art work after the nature study lesson. The children are interested in keeping records of the weather and of the activities on the farm.

The teacher has the child during the plastic period of his life when habits are being formed which are ultimately to determine his character. The teacher's duty and responsibility in this regard cannot well be overestimated. Remembering that "The child is father of the man", she should by example as well as by her teaching restrain the impulsive and encourage the kindly disposed children, and endeavour to lead all to see the evil of the one and the beauty of the other element in character. By her example in performing her school duties she can do more to en-

courage habits of punctuality, neatness and truthfulness than by set lectures on morals, and she will in this way accomplish to some extent what is required of the modern school.

One of the chief ways of forming character is by the teaching of history and literature, and by training the child to read good books. Children, if left to themselves, will not choose the best reading, and if the choice of books is left to parents it will often not be made at all, or, if made, it will be made unwisely. The cultivation of the child's taste for good reading is a matter that should be begun early in life, but to regulate and direct the reading of the child is a serious problem. The books selected should be suited to the child's age, and should contain elements conducive to the formation of good character. Books containing stories of great men are interesting and instructive, and Æsop's fables have a good effect on the moral character, as for example, "The Boy and the Wolf", which shows the evil of untruthfulness.

Each teacher should aim to have her pupils carry away the reading habit as the most precious gift of the school. Good books tend to elevate, to instruct, and to inspire as we come to imitate the characters we read about.

Let us remember—

Not least in our work of duty
Is the teaching of right and truth
To the pliant minds of children
In the years of earliest youth.
It may help perchance in avoiding
A harder task, ere long,
The turning of hearts, grown wilful,
From paths that would lead to wrong.
As we trust in their future safety,
Through devious worldly ways,
With us be the work of guidance
In time of their childhood days.

There was a meeting of the new teachers and the old. It was a sort of love feast, reception, or whatever you call it. Anyhow, all the teachers got together and pretended that they didn't have a care in the world. After the eats were ate, the symposiarch proposed a toast: "Long Live Our Teachers!"

It was drunk enthusiastically. One of the new teachers was called on to respond. He modestly accepted. His answer was: "What on?"—*American School Board Journal.*

The Round Table

[Although THE SCHOOL cannot open its pages to protracted discussions of controversial subjects not intimately connected with the actual duties of the teacher, it has been thought well in the present instance to give space for the elaboration of two conflicting opinions on a rather interesting question. As stated editorially in an earlier issue, THE SCHOOL is not responsible for opinions expressed in the articles which it publishes. With the following letter, the discussion must cease as far as this journal is concerned.—EDITOR.]

The Editor of THE SCHOOL, Toronto:

Dear Sir:

In the February number of THE SCHOOL there appeared an article entitled "The Cadet System". To many of us who are interested both in education and in our country's welfare some of the conclusions drawn by the writer may appear unwarranted, and so may I, as one of these, venture to disagree not only with the conclusions but also with some of the generalizations which, we believe, will not stand the test of facts?

"The arguments against war," says this article, "are two—humanitarian and economic. These arguments are practically unanswerable." This no one will deny; but the writer neglects the most unanswerable of all arguments against war, namely, the moral aspect of the question, when he says that "Christianity itself in nineteen centuries has been unable to check this evil". . . . But, may we ask, what is it, if it is not Christianity, that has led men to see the wickedness of wholesale and often unnecessary slaughter, and has led them to seek for some more humane and just method of settling international difficulties?

It is not to be expected that all wars should suddenly cease. Causes have been operating which can result only in war, and we shall for some time to come, perhaps, reap in violence what has been sown in violence and wrong doing. For, as President Jordan has said in regard to the Balkan war: "The problem comes to us too late for any act of ours to be effective. The stage was set, the actors chosen, thirty-four years ago in Berlin in 1878. . . . . Is is not true that while Turks rule aliens for the money to be extorted, there can be no peace between them and their subjects or their neighbours?" Occurrence of wars now and for years to come only proves that conditions that led to war were made years ago, and that fearful results must come until those conditions are changed. And has not Christianity been the most powerful factor in bringing about this change and in checking the evils of war? But the writer of this article states that "Arbitration after the manner of the civil courts has failed in almost every case, and because it lacks the very

principle that makes the civil court effective". Now if this statement be submitted to the test of facts it will be found that since the beginning of the nineteenth century no less than five hundred and thirty-four international disputes have been settled by courts of arbitration, or by some judicial process instead of war. It would appear, then that the general assertion that arbitration has failed in almost every case is scarcely in accordance with the facts.

After dismissing arbitration as a failure, the article goes on to state that the only way of preserving peace within one's borders is to be strong enough to make any attempts upon them cost the attacker too dear. But is not this precisely the attitude that started the present useless competition in armaments among European nations? And as a result of this we find even the mighty resources of England taxed to such an extent that she is making overtures to Germany to take a naval holiday.

"The evil of militarism does not creep in"—the article goes on to say—"until the state is accumulating power for offence rather than defence." But this general statement does not offer any principle of action or any solution of the problem. For instance, when can a nation decide that her military preparations are adequate for protection only, especially when her preparation necessary merely for defence (as she thinks) is regarded as a hostile movement for offence by some rival power? Thus the costly competition in war-like preparation goes merrily on to the economic loss and decided detriment of the people of both nations, though to the immense satisfaction of those who are interested in the manufacture and use of the machines of war.

The article then proceeds to contrast the systems for military defence in Germany and England, to the very evident detriment of the latter, whose system is characterized as evil in principle. The Canadian system is characterized as having "nothing to recommend it". Now from a military standpoint all this may probably be entirely true. We do not attempt to gainsay it. We are even quite willing to admit that Canada—and England too, for that matter—is behind Germany in the organization of her military defence; and it brings to our cheeks no blush of shame or sense of insecurity or inferiority freely to admit what some might think a most damning confession. For why should Canada in particular be as highly organised for defence as Germany? We would gladly lay the burden of proof on the shoulders of the military expert to demonstrate either that Canada needs a larger or more efficient army than she has at present, or that Germany is any the more prosperous and safe because of the highly organised system of military defence that she has evolved. On the contrary, has not Germany merely set Europe a pace that threatens to break her own neck first, and has she not gained

more jealous enemies than true friends among the other nations of Europe?

The situation of the old world is truly very complicated, and the settlement of ancient wrongs and injustices may yet appear to be impossible without recourse to war. But what shall we say of Canada in this new world, in this new century? What has Canada, a civilised nation in a world-neighborhood of civilised nations, to fear? Why should she be drawn into the vortex of militarism? Canada is a civilian country, not a military one. Her most glorious conquests have been within her own borders in the developing of her great resources, in the opening up of her vast territories. The only problem of foreign invasion that our schools need to combat is the great problem of educating and making good citizens of the vast army of foreigners who yearly come to this land of new opportunity to help in working out Canada's great destiny.

Where then are the enemies against whom she must so greatly increase her defences? The real enemies of Canada, we venture to assert, are not without but within her borders. Her real foes, like those of other nations, are waste, disease, vice, violence, social injustice, and ignorance. When, therefore, the writer of this article asserts that the solution of Canada's defence and "the hope of Canada in the future" is to come from the schools, we most heartily agree; but not by the training of our school boys in the manœuvres of war against an imaginary enemy—not by soldiering, but by citizenship—by the training of the boys in our schools to combat the real enemies of Canada, namely, ignorance, vice, waste, disease and social injustice.

Arthur G. Dorland.

Pickering College, Newmarket.

In colonial times a school teacher in a New England school had occasion to suspect one of her pupils of cheating. All her efforts to find the guilty child proved in vain. Finally she hit upon an ingenious scheme. She brought a duck to school one day, and, showing it to the children, explained that by aid of its magical power she would be able to discover the guilty party. She placed the duck in a small dark trap, and as the children filed before her she compelled each in turn to pass his hand within the trap and upon the duck's back.

Unknown to the children she had covered the duck's back with soot. Now when the children had all undergone the ordeal, she ordered them to hold up their hands. All were covered with soot save those of one littleboy. His guilty conscience had led him to seek to escape undergoing the test and had proven his guilt.—*American School Board Journal.*

Picture Study

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THE subject of Picture Study connected with the courses in art in the Public and High Schools is creating no little interest. In some quarters it is causing difficulty, in others it is arousing opposition. Yet the difficulty and opposition will disappear and the interest will increase as teachers become better equipped to handle the subject and its advantages become apparent.

The discussion of this subject suggests three topics, the *purpose* of picture study, the *choice* of suitable pictures for class study and some *methods* of study.

The purpose of picture study is the development in school children of the power to appreciate and enjoy what is best in those masters who have chosen the brush rather than the pen as a means of expression. Like the masterpieces of literature, the world's masterpieces of art should be given their rightful place in the school room and should be studied much in the same way. Pictures speak a universal language intelligible to all intelligent people irrespective of nationality or dialect. The artistic productions of prehistoric man, of the oriental nations, of the Greeks and Romans, of the men of the Renaissance, of Indian tribes, and of modern schools of art, reveal the habits of life, the thoughta and aspirations of our race throughout the ages. Their visual beauty of line and form, of mass and colour, open to the mind realms of pure delight. Apart from the entertainment they afford, they exert a vital influence upon the thoughts and conduct of beholders.

The choice of suitable pictures for class study allows of no hard and fast rules. The following general principles might be followed.

1. *Pictures of an ephemeral character should be rejected.* Such as depend for their interest upon some passing sentiment are usually void of permanent value. Choose the pictures tested by time.

2. *The selection should be made dependent upon the stage of mental development of the class.* "Do not place before children the adult best," said Henry Turner Bailey; "take something they can understand." All good pictures are illustrative. Each tells in its own way some part of the story of man and his surroundings from childhood to old age. His activities on land and on sea, in peace and in war, his thoughts and feelings, his ideals, his dreams even afford countless themes for the artist's brush. But some are much more easy to interpret than others. Some are adapted to the mind of childhood, while others require for their

understanding all the acumen of the trained adult mind. So that a careful discrimination should be used in selecting pictures whether for class room decoration or for class study.

3. *A selection should be made so as to avoid overlapping the work of other forms in the same school.* It might be a good thing to advocate the adoption for all the school centres of carefully graded groups of pictures for the various forms, allowing teachers a choice within these groups. In this way from eighty to one hundred pictures could be studied during a child's school life, and a glance sufficient to awaken interest could be given at many others.

The question of methods in picture study is involved in the answers to such questions as the following:—

(1) What should we expect from the class in unaided interpretation?

(2) To what extent or in what way should we render assistance?

(3) Should we introduce the facts connected with the history of the artist's life and works?

(4) Should we require an analytical interpretation of the picture, dealing with the composition and general technique of the artist?

The wise teacher will not deprive the children of the joy of discovering, or of attempting to discover, unaided, the meaning of the picture. Neither will he expect too much from them in their first attempts to reach a conclusion regarding the artist's intention. It is a good plan to have pictures hung in the room where they can be viewed daily for at least a month before they are regularly studied. A series of suggestive questions placed upon the blackboard at intervals of a few days will lead to hitherto unnoticed details and consequently to undiscovered meanings. Questions will vary to fit different pictures, but the following are suggestive of others:

1. (*a*) Name all the objects seen in the picture.
   (*b*) What seems to be the purpose of each?
   (*c*) What ones seem to you not to be needed?
   (*d*) Has the artist made a mistake by introducing these, or upon further consideration have you found a reason for their presence?
2. (*a*) What seems to you to be the centre of interest?
   (*b*) Why do you think so?
   (*c*) How are the other parts of the picture affected by this centre of interest?
3. (*a*) Are there people in this picture?
   (*b*) What are they doing? saying? thinking?
   (*c*) Give reasons for your answer.
4. (*a*) Does the picture tell the season of the year or the time of day?
   (*b*) From buildings, furniture, dress, actions, can you fix the nationality of the people, the history of the event, or the thought which the artist wished to illustrate?

5. (*a*) What kind of picture is it? Idealistic? Realistic? Landscape? Portrait? Historical? Religious? etc.

(*b*) Does it record an event? Teach a truth? Or is it merely beautiful?

(*c*) How does it affect you? What emotions, thoughts, criticisms, commendations, does it arouse?

(*d*) Is the picture well-named? How would you name it?

6. (*a*) Who was the artist? When and where did he live?

(*b*) Where is this picture now?

Information of an historical, legendary, literary, religious, or architectural character must of course be briefly supplied at the proper time by the teacher, or, better still, be indicated in books within reach of the pupils.

It will often be found helpful to study pictures in contrasted pairs or groups, either by the same artist or by different artists. While only one of the group may be up for study, the rest help in the interpretation. In these days of cheap reproductions of the masters, it is quite easy to secure many more pictures than those chosen for special study. If studying Raphael's *Sistine Madonna*, place beside it a group of other Madonna pictures by him and other artists. Millet's *Gleaners* becomes much more interesting when associated with other pictures of peasants by himself and Jules Breton. A group of landscapes by Corot helps very much in the understanding of any one of them, and the enjoyment of the study of trees is increased if beside a Corot is placed some landscape by Rousseau or Constable. Mauve's *Spring* and *Autumn* should be studied together. Turner's *Fighting Temeraire* and *Ulysses Deriding Polyphemus* should be associated to get the sentiment intended by the sunrise and the sunset. Lord Leighton's *Captive Andromache* and Burne-Jones' *Golden Stairs* make an interesting pair for contrasting beautiful drapery on dream figures and splendid human forms. A number of pictures upon the same theme, like John White Alexander's and Holman Hunt's *Pot of Basil*, afford by comparison an interchange of thought on the part of the artists in interpreting the picture of either.

The history of the painter's life and works should be referred to, if at all, only incidentally and so far as required to get at the meaning of his picture.

An analytical interpretation also should be brought out only incidentally, and then only with older pupils. We may admire the beauty of line, the harmony of the colours, the splendid arrangement of light and shade, and the rhythm, without undertaking a too complicated investigation of the principles upon which the technique of the various schools of art have been founded. Let us leave that to the college of art.

The Backward Pupil

EDITH A. SANDERS
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[A Paper read at the West Elgin Teachers' Institute.]

BACKWARD pupils are of different types. There are those whom we think must be mentally deficient, for no amount of extra effort from the teacher will ever bring them up with the class in some subjects. These are usually workers, and, after they have been over the work, might just as well be promoted to the next grade, for they will do as well in one class as another and are not humiliated by leaving school in a low grade. Edison is credited with saying that success is made up of five per cent. ability and ninety-five per cent. application, and these pupils are often proof of the statement, for in a very few years after leaving school they are high-grade machinists, or artists in millinery and dress-making, earning as much or more than their school teacher.

Then we have the type that are backward, not so much for lack of ability as for lack of application—pupils that are morally deficient. Nothing will arouse them, not even the strap. Their highest ambition is to be fourteen so they will not have to go to school. They spoil every lesson and are a real detriment to any class. The only thing to do is to rejoice with them when their school time is over.

The backward pupils for whom we must feel most sympathy are those who should never have developed as such—pupils who have been promoted before they are fit, to relieve congestion in some room, to cover a poor teacher's work, to please some parent, or for some other equally unreasonable reason. If a pupil does not understand the arithmetic or composition required for the third book work, what is the use of trying to teach him fourth book arithmetic and composition? It is a difficult thing to arouse a pupil's interest in a lesson when he has nothing in his mind with which to associate it. Such a pupil appears very stupid, when, if in his proper grade, he would be a bright pupil.

Since every child is supposed to advance at the same rate and all pass along at the same time, the best remedy seems to be to allow the pupils who can keep up with the work to go home sometime before 4 o'clock, giving the teacher time to give individual attention to the backward ones.

[Extracts from a paper on the same subject read at another Institute.]

1. It is quite possible that a physician can cure the backward pupil. Consult the parents, try to discover the cause, get them to call in medical assistance.

2. Interest the backward pupil in doing some work about the schoolroom, brushing off blackboards, cleaning brushes, arranging chairs. Frequently, interest in such tasks begets interest in lessons, or desire to please the teacher by doing these tasks begets desire to please in learning lessons also.

3. Develop the pupil's interest in some special subject. In the House for Criminally-Inclined Children in Chicago, one boy after two years' detention was adjudged criminally insane and was ordered removed to the Asylum. The Art teacher discovered his interest in art and asked for a further probation. In the two years since that time the boy has not committed one delinquent act and has become an adept in pen and pencil drawing.

4. Develop an *esprit de corps* in your class, so that every pupil wishes to maintain the good name of the school. The backward pupil will do his very best to avoid bringing disgrace to his class.

5. If the school is large, the slower pupils may be grouped in one class, but no one should ever know that this is the "block-heads' class". When grouped, these pupils may be taught at such a rate that they may be able to make progress, and they are not discouraged by the brilliant achievements of more clever children.

6. During the teaching of a lesson, the easy questions should be given to the backward pupils. Their success in answering these will spur them on to attempt greater things.

7. During study periods the teacher should give special attention to the backward pupil. Then it is easy to find his special difficulty, to help him over his obstacles, to speak an encouraging word.

8. Treatment of the backward pupil requires the exercise of all the tact and all the resource which the teacher can command, but what a satisfaction to be able to note the advancement of such a boy or girl! The backward pupil has a just claim on the time and attention of the teacher; to neglect him is to shirk duty.

9. Are we quite sure that our traditional standards are sound? Why is it that the boy whom the teacher thought a dunce becomes so often a leader in some department of the world's activity?

10. Lastly. (Dare we ask it?) Are we making our lessons so interesting that they appeal to the backward pupils as well as to the brilliant? Is our lesson so taught that it brings out the *best* in *every* pupil in the class? Do we seek the centre of interest in every lesson? Are we sometimes inclined to think of a lesson as something which we are *pounding in* instead of thinking of it as a means by which we are *drawing out* the child's activities? Perhaps some pupils are backward because they are not receiving the right kind of teaching, because the teacher is not enthusiastically interested in the subject and in the class. D.

The Programme of Studies and the Inspector

E. T. SLEMON, B.A., D.Paed.
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IT is generally admitted that in any constructive work the ideal must precede the real. The sculptor sees the statue in the block of marble. The builder builds first a mental temple, afterwards the same in stone or marble. Every stroke of the artist or mechanic is good or bad as it helps or hinders in showing the correspondence between the inner and the outer. The intended real can only be had when, through the proper means consciously employed, the ideal is objectified.

A like relation should exist in any educational system between the aim or ideal of that system and the means employed to give that aim its objectified form. Failure clearly to conceive either the aim or the means or the necessary relation between them must result in deplorable inefficiency.

A careful examination of the programme of studies for public elementary education in Ontario should discover this aim and relation. Roughly stated, our present public school system seeks, on the one hand, to provide the youth with the common instruments of education which have always been regarded as a necessary basis for civilisation symbolised by the three R's; on the other hand, to give along with this an acquaintance with subjects which are of greater present interest to the child and which build into the mind some useful content.

The subjects which were and are still intended mainly to give the first factor in the child's education are well known, since they have for centuries formed the staple and not infrequently, until lately, the sole studies of the school programme—arithmetic, writing, mechanical reading and spelling. From a serious study of these is to come a mastery of the symbols of learning. Their worth lies in their instrumental character.

The subjects of the second group emphasise the experience of the child. Drawing and art, nature study with the field excursion, the school garden and the aquarium, manual training and constructive work, the tale, biography, and the dramatic episode are to supply the more concrete elements of the school programme. The child's interest in life in its various manifestations, as found in and through these, gives him instruction, a real grasp of what is of value both for his present and later life.

By the use of these two factors, properly correlated under the guidance and insight of teachers of high moral purpose, the finished products of our public schools are to be formed—boys and girls who have not only a mastery of the symbols of learning, but are in possession of knowledge which has already formed in them tastes and interests in the world of men and material in which they live. The aim is thus both individualistic and social, training and enriching the individual, and providing through his acquired interest for the good of society.

The whole community of school officers, administrators and teachers should be possessed of a single conception expressing itself differently, but always consistently with this aim, if the system is to produce its best possible results. The adjustment of any part of the system with other parts depends in the last analysis on the possession of this common idea. The whole system at every point and in every activity should express this idea above all others. This does not mean that the individuality of those who carry it on either as administrators, inspectors or teachers is given no scope. It only means that individuality in its freest expression should not be inconsistent with the ultimate ends of the system.

But while it is highly desirable for the efficiency of public school education that all connected with that education either directly or indirectly should know the value of each subject of study for the development of the child, it is of paramount importance that this should be true of the teacher. For however good the courses of study or school organisation and equipment, or however favourable the social environment, the actual contact of the teacher with the child determines the value of it all for the child. The answers to the questions, (1) Has the teacher an intelligent sense of the value of a subject and a real interest in it? and (2) Does he find opportunity to give this subject fair treatment? determine the value of that subject for education. This contact of the teacher and pupils in the actual handling of the subjects of study is the vital part of our system. Here its real value is found and at this point it is tested. If either division of the programme of studies fails to be properly appreciated by the teacher, or, if appreciated, fails to find sufficient time for appropriate treatment, to that extent the whole system is weak and ineffective.

There is, however, no disguising the fact that there is a sad lack in our system just at this point. Those who are at all observant cannot fail to see that throughout Ontario much of the work of the schoolroom, especially in the rural schools, consists in the assigning and the hearing of lessons. If anything further is found, it appears only as an incidental exercise for recreation. There is seldom any balance or correlation between instrumental studies and those giving enrichment of life experience for the child. As a rule the latter find very scant treatment. If in the

teacher's mind there is any whole view of the problem of education it finds hardly a hint of expression in the actual work of the schoolroom, which, after all, is the only way in which it has any real existence for the child and for education. If this be true, it is worth while inquiring into what might possibly be done to better the situation, and to this end some investigation into causes might be of service.

First as to the teachers: Some are graduates of normal schools who see the problem of education in a broad way, and who are making heroic efforts to act in harmony with the best ideas. But they meet with the inertia of an established order and not infrequently with active opposition, and this sometimes, it is said, from school inspectors who are not in sympathy with what is designated as "fads and frills". These teachers are sometimes asked to forget as soon as possible the heresies of the normal school and return to the good old ways of their "successful" predecessors. This, with the addition of opposition or indifference often results, but not always, in a cooling of their ardour and a relaxation of their efforts to carry out their convictions.

There will of course always be inertia to be overcome when introducing or sustaining any reform the value of which is not yet generally appreciated, but with teachers like these, headway can be made if any encouragement be given by those in authority. Here with the least effort the inspector can do much in the interest of education. Here is one of the greatest opportunities he has of making the system bear its legitimate fruit.

Other normal school graduates lack the enthusiasm of those referred to above. They go out to their schools with no great determination to *make conditions*, but rather to fill in the school openings and get along comfortably. They have, however, a fair knowledge of the intended use of the different studies and activities of the programme, but this knowledge is held, as it were, in suspension and its actual application depends, far more than with the previous class, on conditions. For these warm encouragement and timely suggestion from the inspector would mean much. It would bring into the service of education knowledge and skill which had cost considerable both in time and money to produce.

Another large class of teachers consists of those who have not attended any training school since the emphasis was put upon the newer content subjects now found on the programme. Many of these having for years felt the barrenness of the old purely instrumental studies have welcomed the advent of those subjects as of richer content, e.g., nature study, and of more inherent interest for the young, but are at a loss to know just what they mean and how they may best be systematically and profitably presented. Here a greater demand is made upon the inspector who has in

this case to do all that was necessary in the other cases and, in addition, to give leading and to supply light. Mere encouragement is not enough; there must be direct teaching through actual illustration.

At least one other class of teachers remains—those who have neither knowledge of the newer subjects nor inclination to learn. It is not easy in this case to see how the inspector, with the little time at his disposal, can help the situation much. Nature may provide for the removal of some of them and others may find their way to the normal schools.

Enough has been written to show the great importance of the work of the inspector in our system. Work so important can be done well only after a suitable preparation. With regard to such a preparation what is the situation? If appointed some years ago, the inspector found his duties comparatively light. Either a short written or oral examination or the report from such was regarded as sufficient since the course of studies was such as lent itself readily to such a test. The school of good military demeanour, in which there are frequent vigorous and systematic drills on the subjects of study, was approved. It was a mode of inspection not unsuitable at the time and its very convenience has favoured its continuance, in many instances, to the present day. The wider programme and corresponding larger aim of later years demand of the inspector: (1) A grasp of the real worth and significance of every subject of study. (2) A more careful and individual investigation to see that conditions are such as to make the presentation of the newer subjects possible, and also to see that these subjects are sympathetically and intelligently taught. Without the first requisite the second is impossible, for no one who has not a thorough grasp of a subject can say either what conditions favour the proper presentation of that subject, or can tell whether the teaching is good or bad. Efficiency in an inspector consists not only in the power fully to *report* conditions, but in the ability to *teach* and to *inspire*.

The situation as a whole is clearly not ideal. A few suggestions as to particular ways in which it might be improved may fairly be demanded of one who has the temerity to call it in question.

Normal school trained, enthusiastic teachers should be given every encouragement. Their work, often new to the school and neighborhood, should be commended by the inspector and attention should be drawn to it as a standard for others. They should when possible be got to give illustrative lessons at the annual conventions. Teachers of the second class will do almost as good work as those of the first if they are strongly supported by the inspector. All they need is the dynamic persuasion of authority behind them. Teachers who, as students, never took up the new subjects on the programme may be helped by being introduced to helpful text-books, but more, much more, by visiting some teacher

who is actually teaching the work well. A few illustrative lessons taught by the inspector himself would also be of great service and inspiration.

In graded schools, to prevent educational isolation, each teacher should be asked to define to the inspector the value of the subjects he teaches, and to show how his work in any subject is related to that above and below him.

As to inspectors, the best results can be obtained only when there is a perfect harmony between the methods of the normal schools and those of the inspectors. It would seem therefore that as the normal masters now visit the inspectors in their work for a week each year, the inspectors might be given the same privilege for observation, and visit the normal schools annually. Both inspectors and normal schools would profit by such an arrangement. The masters need the suggestions which the inspectors could give, and the inspectors need to see the character of the work done by and for their coming teachers.

Only in this way can the ideal be made real, and the purpose of the educational system for public schools find objectification in the balanced and rounded development of an intelligent people.

The Teacher's Theory Shattered

"Children" said the teacher to his pupils, "you should be able to do anything equally well with either hand. With a little practice you will find it just as easy to do anything with one hand as it is with the other."

"Is it?" inquired the urchin at the foot of the class. "Let's see you put your left hand in the right-hand pocket o' your trousers."

Prof. Brander Matthews, at a literary dinner in New York, said of a certain "best seller":

"Its grammar is rather off. Its author lies open to the rebuke meted out to a Philadelphia author in the early days of the last century.

"This author had been slashed in a review, and he wrote to the reviewer and challenged him to a duel.

"But the critic wrote back:

"'I have read your letter. It is as wretched as your book. You have called me out and I have therefore the choice of weapons. Very well I choose grammars. You are a dead man.'"—*American School Board Journal.*

A New Rural School House

ELIZABETH CRONE
Public School, Mandaumin, Ontario

FROM the far end of the yard, where it used to sit away back, ashamed of itself, among the burdocks, has passed the old school. At the front of the schoolyard, with a school garden on one side, the beginning of a perennial border on the other side, and lawn and flowers, tended by the children, in front, stands the new school, a modern, substantial, red brick building, which wears all over itself, from the big front steps where the children perch on sunny spring days to eat their lunch, to its slate roof and its belfry, a satisfied air of confidence in its own efficiency.

Within the building, on the east side, is a long hall, where the little ones play on stormy days. Opening from this are the two cloak rooms, containing, besides the necessary hooks for coats and hats, shelves for lunches and drinking cups and benches for basins. Each child has his own cup and most of the children bring towels, each for his own use, and very useful articles they are in a country school where the children stay all day.

The class-room has metallic-lined walls, painted in shades pleasant to the eye, an oiled hardwood floor, slate blackboards, single desks, lighting from the north, and good heating and ventilation. It is a room easy to keep clean. With the present regulations being carried out, a daily sweeping at noon, and a general cleaning up occasionally after four,

or at any noon by the pupils, it is *fairly* clean. Some day, when dreams come true, and it is compulsory that rural schools be cleaned at least once a month or once in two weeks, instead of four times a year, it will be *really* clean.

The school is equipped with a small library of much-read books and the walls are hung with pictures, mostly Perry pictures framed. These the children bought with money they earned at the County Fair a year ago.

Opening off the class-room, to the south, is the teacher's room, containing a work table, couch, and, at one end, shelves for miscellaneous school equipment. When the school was being built one of the ratepayers asked how much this room would be used. We have found many uses for it.

For the teacher's own use such a room is almost a necessity. When the janitor is sweeping the class-room after four, and she has work she wishes to do, when she wishes to speak to a pupil or pupils privately, and on many other occasions, she finds it convenient.

When a pupil takes sick at school and is a mile and a half from home, he does not usually feel like walking that mile and a half, and a desk is not a comfortable place for a sick child, so the couch in the teacher's room is occasionally very useful.

There's a time for everything, but one of the problems of the rural school teacher is—to find it. The teacher's room will suggest for itself many uses in economising time. Let the pupil in the second class who learns a multiplication table first take the rest of the class in and drill them on it. Let the third class pupil who has the habit of getting her hand up for more work before the rest have finished theirs, or who, may be, hasn't that habit, take in the second class for "quick" arithmetic or a primary class for a review reading lesson or a backward pupil to help him along. Many children seem to have a natural love for teaching and they love this *real* teaching even better than playing school at noon. There is very little trouble with discipline in this small class-room as the pupil-teacher is expected to open the door as soon as a small pupil fails to work well and the pupils show how much they have done when they come out.

A small room which can be used in this way and plenty of blackboards in the class-room help to solve the seat work problem. Without these a country teacher has to give more seat work than she can properly supervise. Besides, if the smaller classes can get up to the blackboard to do part of their work, or into another room, they give those weary desks a rest.

When having an afternoon gathering of the parents at the school, we have put in oil stoves and used it for a kitchen, when serving refreshments. At the School Fair it is convenient for showing cooking exhibits.

An Electric High School

Bureau of Education, Washington, D.C.

ELECTRICITY from a Government power-house furnishes heat for the new High School at Rupert, Idaho, in the centre of the Minidoka Irrigation Project, according to a statement just issued by the United States Bureau of Education. This is said to be the first case on record where a large building has been heated entirely by electricity.

The system of electric heating installed in the Rupert High School is remarkable for its simplicity. The usual arrangement of hot-air pipes, flues, etc., has been adhered to, but instead of furnaces or steam coils a battery of electric heat units similar to those used in electric baking ovens provides the heat. Twenty 18-k.w. units are installed in pairs, each pair with a separate control of the current from a switchboard in the principal's office. Thus the principal can regulate absolutely the amount of current used. An emergency switch in the principal's office may also be used to cut out all current from the entire building—heat, light, power, etc.

Electricity is put to work everywhere in the Rupert building. A 10-horsepower motor, besides driving the ventilating fan, supplies all the power needed for the lathes and saws in the manual-training department. An electric water heater supplies the hot water for the domestic science department, for the shower baths, for the various lavatories, and for the science rooms. In the domestic science room each girl of a class of 20 has her individual electric disk stove and all necessary cooking utensils. This room will also have an electric range and other electric equipment for serving cafeteria lunches on a large scale.

In the science laboratories electric hot plates are provided for evaporation purposes, and each pupil will have an electric appliance to take the place of Bunsen burners.

The electric lighting system includes an auditorium set with stage lights and switch control equal to those of the best theatres. The lighting and other equipment has been planned with the idea of making the High School building a model "community centre".

The entire electric equipment was planned by local electricians with the assistance of the U. S. Government engineers on the Minidoka Project. The Government supplies surplus current from its own power-house, 14 miles above Rupert, at a cost low enough to compete with coal. It is estimated that the cost of heating the new High School by electricity will be $1,760 per year. Coal might have been used at a cost of about $1,000, but the use of electricity saves the wages of a fireman at $75 per month, and the cost of installing the electric system was $3,000 less than for any other system of heat—the interest on this investment being saved annually.

Duties of School Trustees

H. P. MOORE
Acton Free Press, Acton

NO one can study the Regulations of the Education Department without coming to the conclusion that the responsibility for the success of the school falls not alone upon the Principal, the teachers, and the County Inspector. The trustees are also in large measure responsible. In fact, upon them is placed largely the responsibility of determining the character of the school and the influence it shall exert upon the pupils and upon the community.

The object of the Public School is to improve the human race pyhsically, to develop it mentally, and to strengthen it socially and morally. The public school fails in proportion to its inability to meet these obligations. Healthful environment is the foundation of education; the course of study is one superstructure. The trustees are wholly responsible for the foundation, and if faithful to their important position must assume a fair degree of responsibility for the success of the superstructure.

The trustees' responsibility for providing for the health of the pupils of their schools is of paramount importance. Happily there is no section in this county where eligible and spacious sites may not be secured for our school buildings and grounds at reasonable cost. Most of us have comfortable, well-lighted, carefully ventilated buildings. This latter we all may have. Let none of us be guilty of shutting out the cheapest thing on earth—fresh air. Some one has aptly said, "A person may go three weeks without food, three days without water, but only three minutes without air". Medical statisticians claim that bad air kills 40 per cent. of the people, and is perhaps largely responsible for the illness of the other 60 per cent.

In addition to fresh air we all may have surroundings of trees and flowers, grassy playgrounds, and with very notable exceptions, an ample supply of pure water.

Then there is the trustees' responsibility for the selection of teachers. It is indeed a grave responsibility. It brings harassing and disappointing experiences.

Thirty-five years' continuous experience in advertising for teachers and in corresponding with applicants has proven to me that while most teachers are honourable and loyal to their engagements, there are exceptions. Some are guilty of accepting engagements from two or more

boards at the same time, and, a few days or hours before the opening of the school term, will choose the school which seems to them most attractive in salary or other consideration, and tender resignation of the others. Some are continually on the look-out for better salaries, and even if this is offered in the middle of the term, they will take advantage of the one calendar month's notice allowed by the statute, and leave for pastures new, irrespective of the predicament in which the school may be left. Other disabilities might be mentioned, but I forbear. As a rule the teachers are cultured Christian men and women, honourable in their relationship with our trustees, our schools and our people.

In this County of Halton we owe much to the many faithful teachers for the very gratifying standing our schools occupy among those of the Province.

Now, in the matter of the work in the schoolroom itself the trustees have a measure of responsibility. They should at least satisfy themselves that such elements of true education as self-reliance, fortitude, self-control, endurance and self-sacrifice are being taught. Too often in the past it has been a matter of quantity in the teaching. "A peck of mathematics, a pound of history, a ton of English, a gallon of geography, etc." It is ours to provide for the creation of standards of usefulness and responsibility in all our schools. I am of the opinion that trustees generally will agree largely with Inspector Smith, of Wentworth, who said at the recent Inspectors' Convention at Guelph, that he thought the time had come when the three *H's* should take the place of the three *R's* for the proper development of the pupils for whose education our trustee boards are so largely responsible. By the three *H's* he said he meant the education of the *Hand* to work, the *Head* to plan and contrive, and the *Heart* to govern and control. This adopted, he said, we shall begin to develop the highest type of manhood and womanhood in our pupils.

Naturally, first in importance in the pupil's training is English, oral and written—grammar and composition. It would, of course, be presumptuous in us to outline in any detail any course of study, but as practical men, face to face with the business affairs of life, we may properly suggest and, if necessary, demand that sufficient attention be given this important subject as will result in correct speech and the proper expression of written thought. This will make oral reading an essential feature and will of necessity involve word recognition, phrase recognition, thought recognition and expression. This habit of correct speech must be formed early in life, and the cultivation of the habit should invariably commence in the primary classes of our schools.

A leading educationist has said: "If reading has been efficiently taught, the pupil is able to extract at sight the thought from the printed

page, and neither grammar nor composition will present many real difficulties." Continuing, he said: "We cover too much ground in our course of study, and teach too many technicalities. I think we all will agree with this. These technical requirements divert the mind from the thought, and in too many cases dull the intellect and discourage the pupil."

Again: Have the trustees a duty to the community—especially those of the rural schools—in making the schoolhouse a more common meeting-place for the activities of the section? It is true the towns and cities are centres of organisation, but the rural population must always be the bone and sinew of any country, and the schoolhouse should therefore be the place for training, not only from 5 or 7 to 14, but on up through young manhood and womanhood.

Most of us can remember back in the 60's or 70's or 80's when the country schoolhouse answered many more purposes than it does to-day. There was the winter singing school, the debating society, the occasional writing school, the spelling matches, with lectures, and debates with champions from a neighbouring school, with all the attendant excitement, occasionally a dramatic entertainment, always a meeting-place for young and old, and always the opportunity for the beginnings of courtings and matings for all the countryside.

The building, paid for by public tax, was used for community purposes. The result was a closer general acquaintance throughout the section, a freer interchange of friendships, of views, of intellectual stimulus. The social results were large. The people were more interdependent and self-respecting. From scenes like these men went out with their wives to the West to help develop that great land and show the East how to do things. They went to the cities and took the foremost positions. They made their marks and their fortune, because of the all-round development afforded through the gatherings, the debates, the lectures and other activities afforded in the old red schoolhouse.

Are there not good reasons for reverting to these old-time experiences? Of all people we need to preserve the original, democratic, social ideals, and to provide attractively for the interests of those who have so many common needs and aspirations. Should not our trustees take the initiative and make available again the country school for community needs? The school authorities should be the active spirits in providing and controlling such use of the school properties in their charge. The increased use of the school building for community interests is the recognition of a human need and the effort to supply that need.

Verily, the duties of the trustees are many and varied. They are ofttimes vexatious and exacting, but they are withal important and honourable, and well and faithfully fulfilled they mean more to the community than any other public office in the gift of the people.

Current Events

War in Mexico.—President Wilson has at last been forced to give up his policy of "watchful waiting" for the downfall of Huerta and has interfered in Mexican affairs by force of arms. It seems curious that President Wilson, after having shown such firmness in resisting the strong pressure brought to bear on him to intervene, should at last have had his hand forced by an incident seemingly rather trivial. A body of American bluejackets, landing at Tampico, were arrested by officers of General Huerta. Local Mexican authorities, however, immediately released them and apologised for their detention, an apology afterwards endorsed by General Huerta. This apology President Wilson declined to accept and supported the demand of the United States Admiral on the spot, that General Huerta must, in addition, formally and unconditionally salute the American flag with his guns. When this was not done within the time limit assigned, American ships of war were hurried to Vera Cruz, a body of marines was landed and seized the Customs House and Public Buildings. More than a hundred Mexicans and several American sailors were killed. The town is now held under martial law.

In his message to Congress dealing with this affair, President Wilson, though his government was then practically at war with what is left of the government of Mexico, cautiously avoided any declaration of war. He spoke of his deep and genuine friendship for the Mexican people and assured them that his warlike preparations were entirely against General Huerta and not against Mexico. Most people, however, find it difficult to see how the United States can wage war against one man. The message has been the subject of much comment and some adverse criticism. A war avowedly to avenge insults or injuries put upon the United States citizens by General Huerta might have awakened national pride and enthusiastic support; but not a war in consequence of this Tampico incident with its seemingly trifling discussion of forms of international etiquette.

It was difficult to reconcile the previous passive attitude of President Wilson with so much insistence on the gravity of this affair. As one editorial puts it: a message which should have made the people's hearts burn only made their heads ache.

For a time it seemed as if military occupation of Mexico by the United States was inevitable and everyone was relieved when three South American Republics—Argentine, Brazil, and Chili —offered their mediation to settle the dispute. The offer was welcomed by General Huerta and eagerly accepted by President Wilson. Delegates have agreed to meet in Canada at Niagara Falls. It is to be regretted that neither

Carranza nor Villa, not to mention Zapata, has been included in the negotiations which might otherwise promise such a solution of the difficulty as would bring lasting peace to Mexico. In the meantime Huerta's downfall is, as usual, imminent.

The Ulster Volunteers. -The latest exploit of the Ulster Volunteers has at last aroused the government of Premier Asquith to action. Some weeks ago a ship appeared off the coast of Ulster and, acting in concert with a strong organised force of the volunteers, succeeded in landing some forty thousand rifles and half a million cartridges at various points along the coast. Automobiles held in readiness for the purpose transported the arms and ammunition to places of safety in the interior. Coastguards were overawed by superior force and apparently no active resistance was attempted. Premier Asquith spoke of the incident as a "grave and unprecedented outrage". The coast of Ulster is now patrolled by British ships of war.

It would appear, however, from recent utterances of Mr. Balfour and Sir Edward Carson, that they are now prepared to acknowledge at least the general principle of Home Rule for Ireland, an admission which has done much to clear the way for a settlement by consent, probably along federal lines.

The Hapless Voter.—The New York *Nation*, writing on the Colorado strike, points out the extreme difficulty of getting accurate information with regard to the general situation there. It points out that the frank and definite statements of Mr. John D. Rockefeller, Jr., are explicitly contradicted by representatives of the miners: that a congressional committee of inquiry that visited the scene of disturbance did not throw light on the merits of the controversy, and that the Congressman who called on Mr. John D. Rockefeller on behalf of President Wilson was unable to satisfy himself as to the real merits of the case. What chance has the average man, the unit back of public opinion, to make a proper judgment?

A recent book on the government of the United States points out that in the district where the author lives the electors had to fill 179 offices in the course of four years. On one voting paper the author was required to select the holders of 34 offices from 181 names only 26 of which were known even remotely to him. Similar, but much less extreme, instances are not uncommon in our own province. How many people who vote for aldermen in a city ward have any personal acquaintance with, or any particular knowledge of the records of those for whom they vote? We must develop a new civic sense or some new political methods, or both. The schoolmaster can do much to help.

W. E. M.

Suggestions for the Class-room

Discipline: Do not forget the value of good discipline, More fail from lack of it than from all other causes combined. Force alone will not bring it about. Some people could not secure good discipline even though they had a policeman in the room. It takes tact, firmness, and fairness to secure it. Poor discipline begins early in the year. Be on your guard. Keep in touch with progressive movements in your own profession. Take a school paper and read some books on methods and on teaching in general. The time and the money that you spend in this way will be returned to you many times over in the satisfaction you will feel in your own increased efficiency.—Thomas B. Stoel in *Normal Instructor.*

A Modern Spelling Match.—Will a child ever tire of "spelling down"? I think not; but a variety even in this most fascinating contest would afford more interest than ever on the part of both children and teacher.

The teacher gives each child a word to spell, but does not say whether it is right or wrong; that is, if a word is misspelled she gives the next child a new one anyway. The one who notices the error in spelling waits till it is his turn, then, instead of spelling the word given him, takes the one that was previously misspelled, and spells it correctly. The children from and including the one who misspelled the word, to the one who spelled it correctly are "spelled down", and must take their seats.

The little variation makes the children keener observers of what is right and wrong, develops individuality, and independence in judgment and results in more accurate work. The children listen with open ears to every word, under these rules, whereas, in the old-time spelling match they paid no attention whatever when others were spelling except to notice whether they remained standing or were obliged to take their seats. —Frances Thorstad in *School Education.*

A Hint for Teachers.—"She was the best teacher I ever had," said a young man, in speaking of one who had been very successful in that work.

"I know I was an idle, mischievous lad, and must have tried her patience sorely, but she never reproved me audibly. Without pausing in the recitation she was hearing, she would make her way around to my seat, and whisper a reproof in my ear.

"This sort of confidential relation between us which this method seemed to establish, had a wonderful effect on me, and I know I grew better-behaved, attended to my books better, and really learned more than in any other term that I ever went to school."—Mrs. M. W. Baker in *The Educator-Journal.*

Hints for the Library.

Pitman's Shorthand Instructor. Centenary edition, 313 pages. Isaac Pitman & Sons, 2 West 45th Street, New York. This is a combination of Pitman's Manual and Instructor. It is well-bound and specially adapted for a text-book that may be carried in the student's pocket. The book is a worthy souvenir of the birth of the inventor of the system. Some of the rules which have been improved are:—

(1) Short and long vowels between consonants are written in the same positions. (2) The diphthongs "i" and "oi" are to be written in the first place; the diphthongs "u" and "ow" in the third place; the triphthong "wi" as such has been discarded. (3) Simple phraseography is introduced immediately after the diphthongs and is continued to the end. (4) Lightly sounded medial vowels may be omitted as the second vowel in answer. (5) The light sound for "ns" after a curve must be written with the stroke "n" and circle "s" without exception.

Many of the other rules have been revised and simplified. The pronunciation of words has been made to correspond with that shown in the latest and standard dictionaries. Many new exercises have been introduced which should lighten the labour of the teacher and increase the speed of the student. J. A. I.

Lessons in Physics, by L. D. Higgins, Ph.B., Instructor in Science in the State Normal School, Danbury, Conn. 379 pages. 90 cents. Ginn & Co. The author of this text has kept in mind the needs of the pupil and has succeeded in presenting his subject matter so clearly that the beginner will have no difficulty in understanding it. Facts which are common in the daily experience of the student have been used in explaining the various principles. Diagrams are simple and well drawn and the book ranks high as a student's text. G. A. C.

Diane of the Green Van, by Leona Dalrymple. Copp, Clark Co., Toronto. $1.35 net. While certainly not adapted for the school library and not a book for children, it will make interesting reading for the tired teacher holidaying at the water's edge or in the hammock. The principal characters are in revolt against conventionality and the story is an unusual and remarkable one. This novel was awarded the $10,000 prize in a contest, conducted by the New York *Evening Sun,* in which 500 manuscripts were submitted.

Overland Red. Copp, Clark Co., Toronto. A story of California in the "gold-rush" days. The hero is an ex-sheriff turned hobo and finally prospector. A good book for vacation reading. A wholesome story of the rough life of the frontier. The character-picturing is well done and the plot is interesting.

Pictures of Famous Travel, by H. C. Barnard. 64 pages. 1s. 6d. London: A. & C. Black. The Macmillan Co., Toronto. The type is large and readable. There are 59 illustrations, 31 of which are in colour. This book covers in outline the history of geographical discovery from the days of the Phoenicians down to the recent conquest of the North and the South Poles. It makes an excellent adjunct to the history or the geography lesson. It deals in an interesting way with men of whom we get only the names in most histories, e.g., Marco Polo, Vasco da Gama, Balboa, Magellan, Hudson, Baffin, Captain Cook, Mungo Park, Tasman. It makes suitable reading for pupils of Third and Fourth Book grades, and will tend to increase their interest in history and geography.

A First Book of Experimental Science for Girls, by Mrs. Jessie White, D.Sc., 134 pages. Price 1*s.* 6*d.* A. &. C. Black, London. The Macmillan Co., Toronto. The object of this book is to make the house a subject of scientific interest and the author has succeeded in presenting the work in a clear and interesting manner. G. A. C.

Sound. An Elementary Text-Book for Schools and Colleges by J. W. Capstick, M.A., D.Sc. 288 pages. Cambridge University Press. This addition to the Cambridge Physical Series treats the subject without recourse to advanced mathematics and should be welcomed by teachers who feel the need for a reference book covering the work more fully than the authorised text. G. A. CO.

In addition to the helps mentioned in the April number of THE SCHOOL, special mention should be made of the very excellent *Turner Picture Studies* published by the Horace K. Turner Co. of Oak Hill, Newton Centre, Boston, Mass. This series consists of thirteen books of forty pages each, containing in all one hundred and thirty pictures adapted to the various Public School and High School grades. Accompanying each picture is a very readable article upon the artist and his picture, with suggestive questions to aid in the interpretation. The author of these valuable books is Ada Whitton Tillinghast, a valued contributor to THE SCHOOL on Schoolroom Decoration. It is sold at thirty-five cents for each book.

Educational pamphlet No. 5, containing a list of reproductions of works of art, and recently issued by the Department of Education for Ontario, will be found very helpful in making a choice of pictures either for study or for schoolroom decoration.

S.W.P.

Notes and News

[Readers are requested to co-operate with the Editorial Staff by sending in news items suitable for this section.]

With this number the second volume of THE SCHOOL is completed. For the convenience of those who wish to bind the ten numbers we print a title page and an index in this issue.

Many of our subscribers will secure new positions during the summer vacation. May we ask that they will notify us promptly of change of address so as to avoid loss and delay in forwarding future numbers of this journal? If particulars are given, we shall be glad to insert the news item in this department.

Miss Ethel M. Hall of Weston writes:—"A wail of dismay will no doubt rise from the lips of hundreds of primary teachers when they hear that their department has been deprived of one of its most valued teachers —Miss Anna Sinclair Graham. Miss Graham's name has been for years associated with the very latest ideas on primary work. She possessed the rare faculty of giving inspiration to those with whom she came in contact and inspired them to their best efforts. She wrote many helpful articles on almost every phase of elementary work. Her book, 'Primary Work', which was published by the Morang Co. in 1907, has been widely read. She was also connected with the editorial staff of the *Western School Journal*, and in that capacity exerted a far-reaching influence. Miss Graham taught for years in Minnedosa, Manitoba. Last year she was appointed Supervisor of Primary Methods in the Brandon Public Schools. Readers of THE SCHOOL will feel like extending congratulations and best wishes to one who has been not local or even provincial in her interests, but truly a *Canadian* educationalist. It is hoped that her home life in British Columbia may be the very happiest and that her pen may not forget its old-time interest."

Because "some one had blundered" we were made to say in this department in our May number that there was now a High School at Morrisburg. The place meant was Morewood. As most teachers know Morrisburg has had a Collegiate Institute for a number of years (since 1890), and secondary education in that town has been since 1882 under the efficient administration of Mr. J. S. Jamieson, M.A. Dundas County has a Collegiate Institute at Morrisburg and High Schools at Iroquois, Winchester, Chesterville and Morewood, the three last named having been Continuation Schools until last September. Winchester township, which is approximately ten miles square, has three High Schools, and every bit of property in the township, both urban and rural, is in a High School district.

We were glad to receive a copy of "The Collegiate Outlook" published by the Collegiate Technical Institute of Moose Jaw, Saskatchewan. This is a very bright and interesting journal.

Inspector J. H. Smith of Wentworth has introduced a potato growing contest for the pupils of the schools in his inspectorate. Three prizes are offered in each school section, and very explicit directions are given in the circular as to conditions, among others the points regarding which each competitor is to comment in his diary of the work done. This is surely a very practical means for the encouragement of school gardening.

Teachers who intend taking a summer course should see pages XI, XVI, XVIII, XIX, XX and XXVI of this issue of the SCHOOL.

Prospect Avenue School, Port Arthur.

We are indebted to Mr. D. R. Harrison, Supervising Principal of Port Arthur Public Schools, for the accompanying cut of the new Prospect Avenue School in that city. The school is brick with Bedford sand stone trimmings, 12 rooms, arranged for enlarging to 20; 7-foot burlap and oak-trimmed inside; all rooms and corridors equipped with vacuum cleaner connections; unilateral lighting in each room; fire-proof steel stairs; individual drinking fountains and bubblers. The cost, equipped, was over $95,000.

Inspector J. Elgin Tom of Goderich has kindly sent us a set of "Simple Rules for Spelling". These are exceedingly accurate and comprehensive and should be very valuable to teachers and pupils.

The Fourth International Congress on Home Education will convene in Philadelphia, September 22-29, 1914, under the auspices of the Inter-

national Commission on Congresses on Home Education and Parent-Teacher Unions. Over five hundred delegates, including official representatives of twenty foreign nations, are expected to participate in the meetings of the Congress, which promises to be the greatest congress on the welfare of childhood and youth that has ever been held in any country. The General Secretary is Mrs. J. Scott Anderson, Directress of Torresdale House, Torresdale, Philadelphia.

School Gardening has a very enthusiastic and energetic advocate in Inspector A. Kennedy, M.A., of Weyburn, Sask. In conjunction with Mr. S. Phillips, Principal of the Weyburn School, he has arranged to use the school garden for teaching civic government. The *Weyburn Review* says, "The land has been surveyed and marked out to represent a number of townships, following the system used in the provincial survey, with the one exception that, owing to the limited space, the unit will represent two sections of land. Roads will be represented by footpaths, and each child will have one unit on which to work. Notice boards have been placed on each unit, showing number of sections, township and range, and the pupil's name."

The rapid growth of school gardening in Saskatchewan is shown by the proposal to organise a special section of the Saskatchewan Educational Association to deal with this work. Arrangements have also been made for a short course for teachers to be held at Saskatoon University during the first two weeks of July.

Social reform proposals, including free food in the schools, are outstanding features of the new budget introduced by the British Government.

Hon. Capt. C. E. Jamieson, B.A., F.R.C.I., of the Peterborough Collegiate Institute, was appointed in January of this year to act on the Cadet Committee.

Mr. F. J. Barlow, B.A., of this year's class in the Faculty of Education, University of Toronto, has been engaged to teach science next year in Oakwood High School, Toronto.

Miss Florence I. Wilson, of Owen Sound, will teach primary work in Port Arthur next year.

Mr. Wm. E. Shales, B.A., has been appointed Science Master in Ingersoll Collegiate Institute.

Mr. Chas. Thompson, a practical cabinet-maker, has been appointed instructor in manual training in St. Thomas Collegiate Institute. Mr. C. M. DeGroat, who held this position, has been engaged for similar work in Fort William.

Miss Belle Donald, of St. Mary's, succeeds Mr. H. F. Klopp as teacher of S.S. No. 7, East Nissouri.

Mr. Douglas R. Fletcher has been appointed to fill the vacancy on the New Hamburg teaching staff.

Mr. D. Currie, of Creemore, has been engaged as teacher of U.S.S. No. 2, Drury, Denison and Graham.

Mr. Scott, of Midland, has received the appointment of Principal of Consecon Public School.

Mr. J. E. Gray, B.A., of the class of 1913-14 in the Faculty of Education, Toronto, has been appointed to the staff of McMurrich Public School, Toronto.

Mr. R. D. Coutts. B.A., Principal of Georgetown High School, has accepted the principalship of the High School at Moosomin, Sask.

Miss Marjorie Sproule, of Toronto, has been appointed to the school in Albion.

Mr. A. P. Gundry, B.A., of Strathroy, has been appointed principal of Galt Collegiate Institute.

Miss Blanche L. Charters, formerly of Meaford, is now teaching in S.S. No. 2, Nottawasaga.

S.S. No. 7, Elma, has secured the services of Miss Jean B. McIntosh of Holyrood.

Miss L. V. Prichard, of Guelph, has accepted a position on the Cochrane Public School staff.

Miss M. Johnson and Miss Bessie Frank, of the Stratford staff, have been granted one year's leave of absence in order to exchange work with teachers from England.

Miss Wanetta M. Betzner, of Berlin, and Miss Grace Crompton, of North Bay have been appointed Kindergarten Directresses in Fort William.

Miss C. Agnes Beamish is now teaching in S.S. No. 2, Dover.

Mr. W. H. Martin, B.A., and Mr. E. T. Bell, B.A., of the 1913-14 class, Faculty of Education, Toronto, have been appointed to the Science staff of Brantford Collegiate Institute. Mr. L. H. Clarke, B.A., will teach Mathematics in St. Catharines Collegiate Institute for the balance of the term.

The following members of the 1912-13 class, Faculty of Education, Toronto, are teaching in Toronto:—A. B. Allin, B.A.; H. E. Armstrong, Emma B. Belyea, A. H. Elliott, F. W. Elliott, C. S. Gulston, W. M. Hobbs, Muriel C. Langley, R. J. Lowry, A. May McHardy, W. C. Monkman, R. J. Neelands, R. M. Proudfoot, W. F. Rattle, J. C. Stothers, C. A. Vickery, R. N. Welsh, W. T. Brown, W. H. Carlton, F. C. Ramsden.

The decision of the Toronto Board of Education to enforce the regulations governing the retirement of teachers on reaching the age limit of

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sixty-five years has caused considerable discussion. Deputations from the Board of Trade and other associations have appeared before the Board of Education to ask that this decision be reconsidered in cases where the teachers are still capable of efficient service.

At one of the meetings of the Ontario Educational Association, Dr. Colquhoun, Deputy Minister of Education, stated that a pension scheme for Ontario teachers would be taken up by the Government at the next session of the Legislature.

Attention is being directed to the necessity for medical inspection in rural schools. In an address before the Ontario Health Officers' Convention, Dr. Millen emphasised the fact that a great number of these schools are in a deplorable condition as regards sanitation, ventilation and cleanliness, and recommended that a system of county health officers appointed by the Provincial Board of Health be established.

The course of studies at the Naval Training College at Halifax is to be revised and conducted along the lines of the Royal Military College at Kingston. In addition to a general education, cadets will receive instruction in marine subjects, thus qualifying them for employment in the hydrographic, tidal and current services.

Nine of the eleven members of the Canadian team which will take part in the Imperial Cadet matches in England are from Calgary.

The Second Annual Canadian Cadet Tournament held in the Arena Gardens, Toronto, on May 1st and 2nd was a decided success. One of the most pleasing of the numbers was the physical training exhibition by Toronto school-girls.

The entire top of the new Orde Street School, Toronto, will be used as a fresh air school. If the experiment proves successful the idea will be extended as far as possible to other schools.

The Government has increased the grant to the Victoria Industrial school to $4.20 per boy per week.

According to a statistical report by the Census Branch the total population of Canada between the ages of 6 and 20 years was 2,141,909 of which number 52.5 per cent. were attending school in 1910.

The Summer Model Schools will be located this year at Bracebridge, Gore Bay, Ottawa, Port Arthur, Sharbot Lake and Sturgeon Falls. The purpose of these Schools is to prepare teachers for District and Third Class certificates. Application for admission must be made to the Deputy Minister, Department of Education, not later than June 20th on a form to be supplied by him. Arrangements are made by the Department to pay, under certain conditions, the board and railway fare of teachers-in-training. Two courses are given, one for those who have attended before, and one for those who have not.

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Mr. B. A. Upshall, B.A., of Walkerton, will teach classics in North Battleford High School next year.

Miss Maie Kennedy, of Espanola, has been appointed to the school in Biscotasing.

Nova Scotia.

Prof. C. L. Moore has completed his year as Instructor in biology at Dalhousie University, and has begun his summer course with the Provincial Normal College, Truro.

Miss Mary Fitz-Randolph has resigned her position on the Truro teaching staff. She is succeeded by Miss Helena Withrow, B.A.

Miss Hilda Feindel and Miss Marie Ramey have obtained leave of absence from their schools in Queen's County to take a special course in Rural Science at Truro.

Among teachers who will conduct District Fairs in connection with their schools this year are Principal Wm. Doane, Bass River, and Principal A. E. McCormick, Canning. Under the encouragement offered through the Dominion grant to Agriculture, a very general interest is being taken in school gardening.

Miss Mary Seeley will substitute for Miss Agnes Moses in South Ohio during May and June.

Manitoba.

The schools of Winnipeg, Portage La Prairie and Brandon will close for vacation on Friday, June 19th. The schools of many of the towns will close on the same date.

A large number of Manitoba teachers are planning to attend the National Educational Association to be held in St. Paul, July 6th to 10th. It is possible that one or two special cars may be attached to the regular train in order that all may go together.

Consolidation of rural schools is a very live subject in Manitoba, especially in the new and sparsely settled districts where many children have too far to walk. Upwards of twenty consolidated districts have been formed since September last.

The Board of the Canadian Industrial Exhibition is offering free trips and accommodation to the Exhibition in July for one hundred farm boys of the Province who will write the best essays on "Farm Wastes". The boys will be in charge of the Y.M.C.A. directors while in Winnipeg.

A large number of town, village and consolidated schools throughout the province are planning to hold school Fairs early in September. Competitions will be held in all lines of school work, but special emphasis will be laid upon industrial, school-gardening and agricultural products. The winners of the various individual schools will compete at a Municipal

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School Fair held shortly afterwards when in many cases a Field Day will be held as well. The winners at the various Municipal Fairs will compete for provincial honours at the Brandon Live Stock Show when competitions will be held for farm boys and girls in vegetables, grains, poultry, a pig and steer-feeding contest.

New Brunswick.

A Rural Agricultural Course for teachers will be given at Woodstock from July 8th to August 5th next, under the direction of R. P. Steeves, Director of Agricultural Education. The course will include horticulture and school gardening, animal study, soil physics and chemistry, rural domestic science, and farm mechanics. A satisfactory completion of two of these summer courses entitles a teacher to a Full Course Certificate; a satisfactory completion of one summer course entitles a teacher to a Partial Course Certificate. Teachers attending this course receive, in addition to travelling expenses, $20.00 at the end of the first term in which they perform approved school garden work in connection with their schools. Schools doing approved school garden work under the direction of a full course certificated teacher will receive, in addition to the above, and any other government grants to which they might otherwise be entitled, $50.00 to the teacher, and $50.00 to the trustees for the first year, and thereafter $30.00 per year, payable half-yearly. If the teacher employed holds but a Partial Course Certificate the government grant to both teacher and trustees will be $30.00 per annum.

The Encaenial Exercises of the University of New Brunswick were held in the University Library on the afternoon of the 14th of May. Degrees in Course were conferred as follows:—Two for M.A. Degree; for B.A., 10; for B.Sc. in Civil Engineering, 10; for B.Sc. in Electrical Engineering, 4; for B.Sc. in Forestry, 3.

Honorary Degrees of LL.D. were conferred upon Sir Frederic E. Barker, Ex-Chief Justice; Hon. W. C. H. Grimmer, Hon. O. S. Crocket, and Hon. J. H. Barry, Justices of the Supreme Court; and Dr. H. S. Bridges, Superintendent of the St. John City Schools.

The Honorary Degree of M.A. was conferred upon Miss Mary K. Tibbitts, the first lady graduate of the University of New Brunswick, and the Honorary Degree of M.Sc. on Mr. T. G. Loggie, Deputy Minister of Lands and Mines.

A special feature of the exercises was the unveiling of a large size portrait in oil of W. Brydone Jack, D.C.L., late president of the University of New Brunswick. The portrait was presented by the members of Dr. Jack's family.

Subscriptions are being solicited by the friends of the University to build a new Science Building. So successful have they been that its erection now seems assured.

Ministers, teachers and others interested in religious and educational work in **Western Canada,** will shortly have the opportunity of examining two of the most interesting pieces of **Projection Apparatus** in use to-day.

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Our representative will be in the West during the months of May and June, and plans to visit Sudbury, Port Arthur, Fort William, Winnipeg, Portage-la-Prairie, Brandon, Regina, Moose Jaw, Saskatoon, Prince Albert, North Battleford, Edmonton, Calgary, Victoria, Vancouver, Lethbridge, Dauphin, Weyburn, Yorkton, New Westminster, Swift Current.

If those interested will write to us, we will be glad to notify them of the exact date when our representative can be seen.

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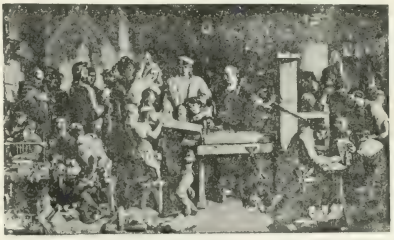

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